WM-EX550/EX552

SERVICE MANUAL

AEP Model
E Model
WM-EX550/EX552
Tourist Model
WM-EX552

Photo: WM-EX550

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MT-WMEX550-125

SPECIFICATIONS

Tape Section

Frequency response (Dolby NR off)
Playback: 20 – 18,000 Hz
Output
Headphones ∩REMOTE jack
Load impedance 8 – 300 ohms
Power output
4 mW + 4 mW (16 ohms)

General

Power requirements
1.5 V
One R6 (size AA) battery
Dimensions (w/h/d)
Approx. 108.9 × 79.6 × 28.6 mm, incl. projecting parts and controls
Mass
Approx. 145 g
EX552: Approx. 240 g (incl. battery, headphones with remote control and cassette)
EX550: Approx. 235 g (incl. battery, headphones and cassette)
Supplied accessories
- Stereo headphones with remote control (1) (EX552 only)
- Clip (1) (EX552 only)
- Stereo headphones (1) (EX550 only)
- Carrying case (1)
- AC plug adaptor (1) (EX552, Tourist model only)
- Rechargeable battery NC-AA, 1.2 V, 600 mAh, Ni-Cd (1) (EX552, Tourist model only)
- Battery chager (1) (EX552, Tourist model only)
- Sony battery R6P (SR) (1) (EX552, Tourist model only)

Design and specifications are subject to change without notice.

When to replace the battery

Replace the battery with a new one when the BATT lamp dims.

Battery life	(Approx. hours)	
	Sony alkaline LR6 (SG)	Sony R6P (SR)
Tape playback	29	8

Note
- The battery life may shorten depending on the operation of the unit.

For maximum performance we recommend that you use an alkaline battery.

Notes
- Do not charge a dry battery.
- When the battery is replaced the setted functions will be cancelled, the unit will return to the factory settings.
- When you do not use the Walkman for a long time, remove the battery to avoid any damage caused by battery leakage and subsequent corrosion.

House Current (see Fig. A-©)

Connect the AC power adaptor AC-E15HG (not supplied) to the DC IN 1.5V jack and to the wall outlet. Do not use any other AC power adaptor.

Polarity of the plug

CASSETTE PLAYER

MICROFILM

SONY®

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SERVICING NOTES

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ° C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering

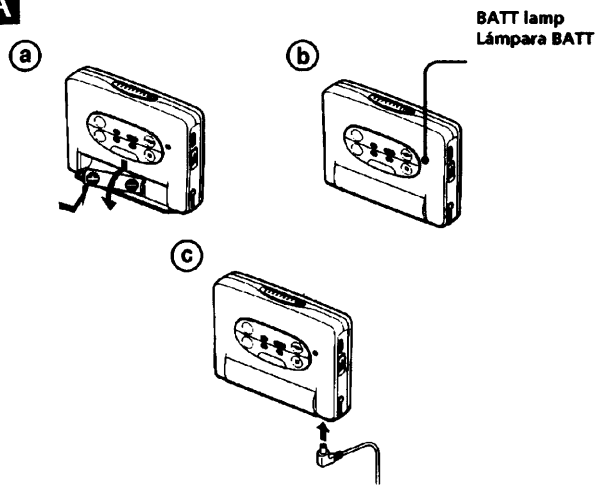
Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SECTION 1
GENERAL

This section is extracted from instruction manual.

A



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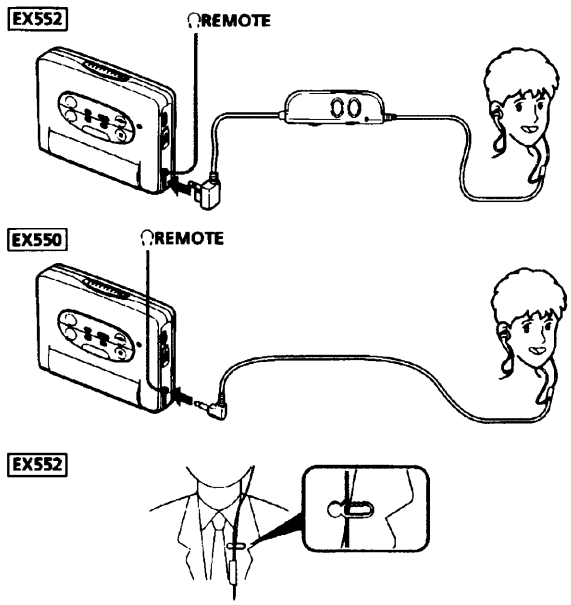

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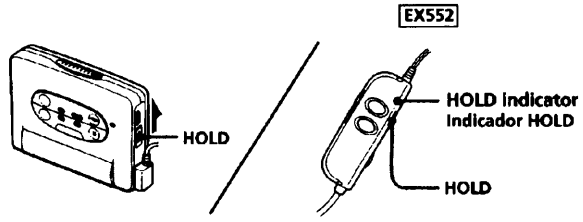

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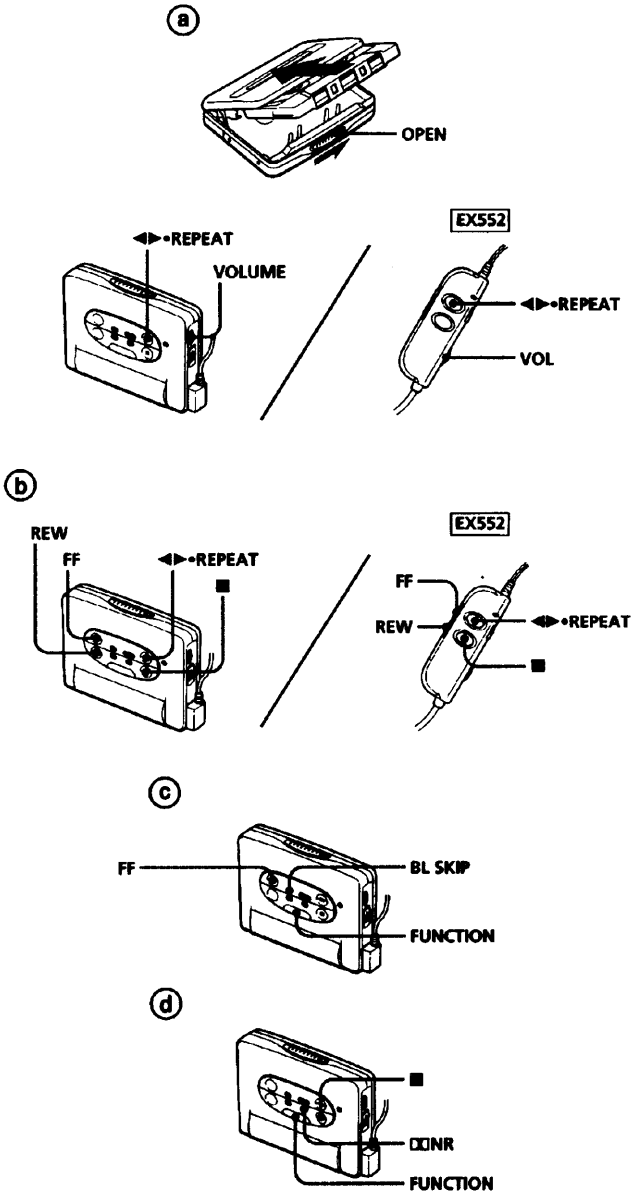
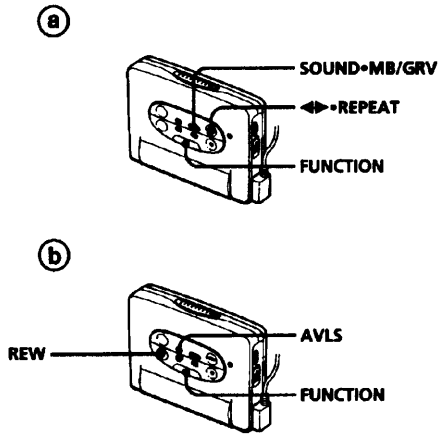


E



SECTION 1
SERVICING NOTE

This set detects the rotation of GEAR (PH) using the PH701 (photo reflector). The PH701 is mounted on the MAIN board, and therefore the GEAR cannot be detected with the MAIN board removed. As a result, the motor cannot be controlled, causing malfunction. Further, the S702 (FWD/REV switch) is also mounted on the MAIN board, and with the board removed, the mechanism position cannnot be detected and the operation is not changed over. Therefore, when the voltage check is executed with the MAIN board removed, follow the procedure provided below.

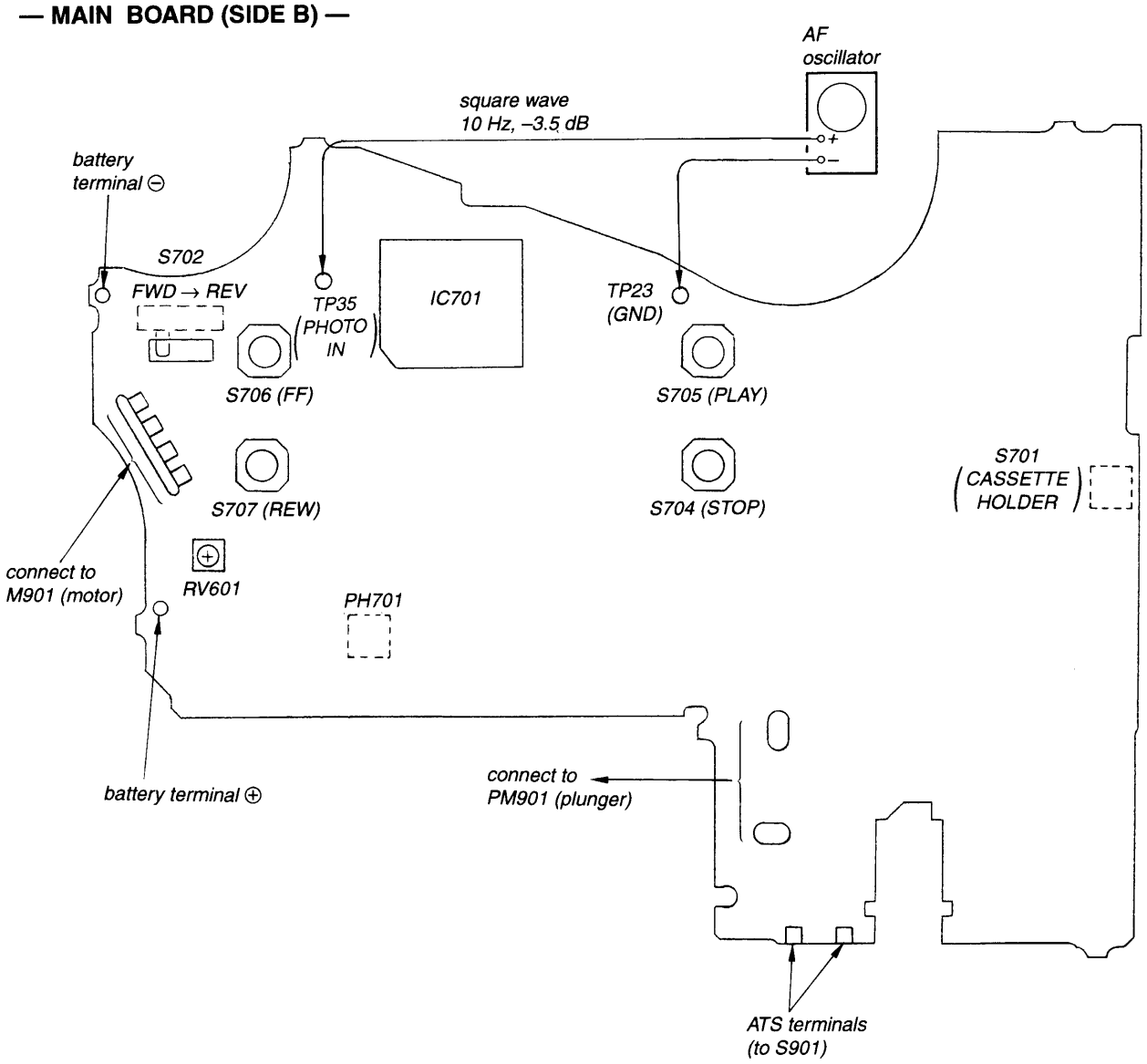
Note : Do not move the S702 switch position when removing the MAIN board.
If it is moved, the set will not be changed over to the selected mode. In this case, reconnect the MAIN board to the set and retry the work from the beginning.

1. Setting
1) Refer to "3. DISASSEMBLY", and remove the cabinet and open the MAIN board.
2) Connect the MAIN board to the M901 (motor) and PM901 (plunger) using jumper wires.
3) Short the ATS terminals.
4) Press and fixed the S701 (CASSETTE HOLDER).
5) Supply 1.5V to the battery terminals ⊕ and ⊖ using a stabilized power supply.

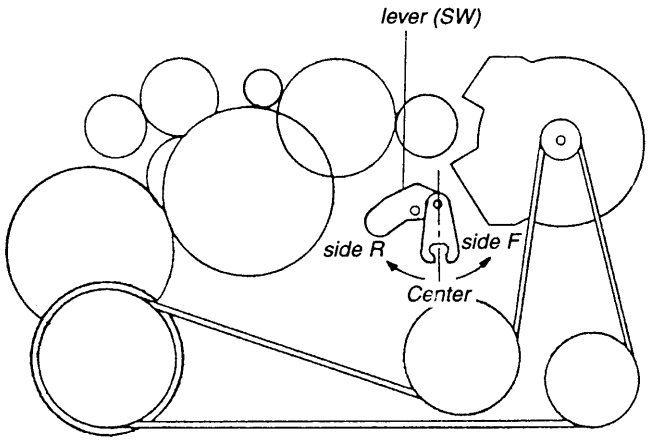
2. FF, REW Modes
1) Input a square wave to the TP35 (PHOTO IN) and TP23 (GND). (See figure below)
2) Press the S704 (STOP) for selecting STOP mode.
3) Press the S706 (FF) or S707 (REW).

3. PLAY mode
1) Input a square wave to the TP35 (PHOTO IN) and TP23 (GND). (See figure below)
2) Press the S704 (STOP) for selecting STOP mode.
3) Press the S705 (PLAY). (Each time the switch is pressed, the mode is changed over.)

— MAIN BOARD (SIDE B) —

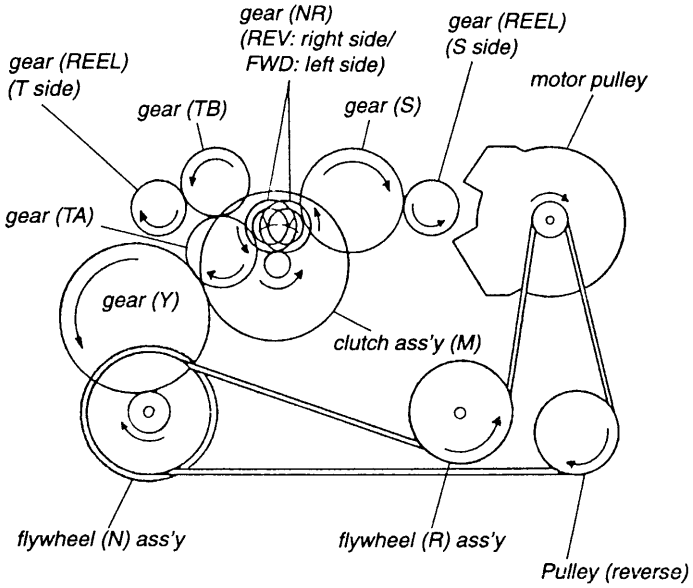


Lever (SW)

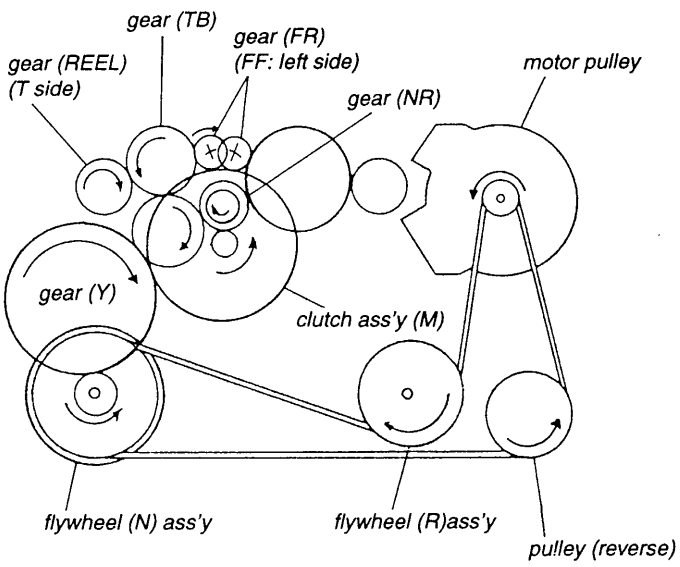


Rotation system

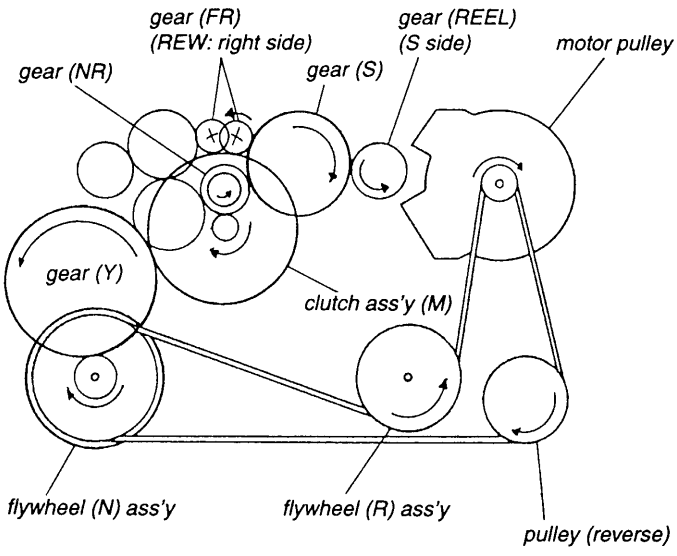
Rotation system during PLAY.



Rotation system during FF.

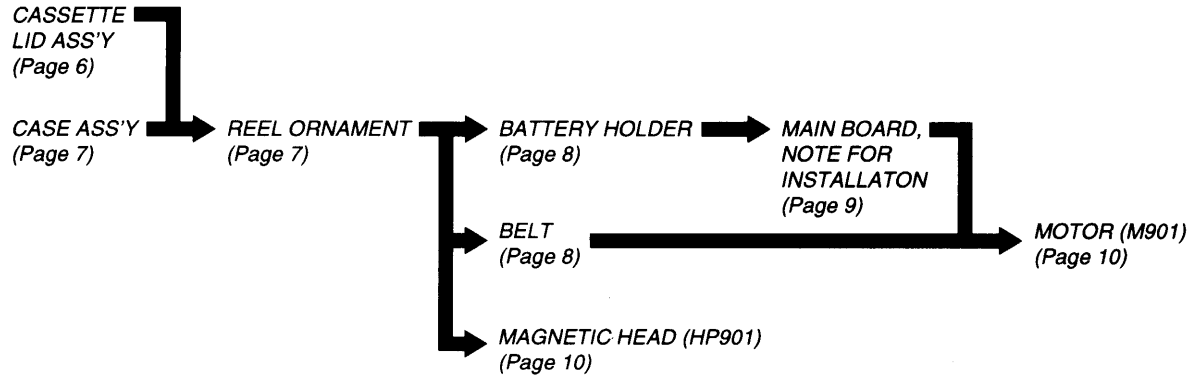


Rotation system during REW.



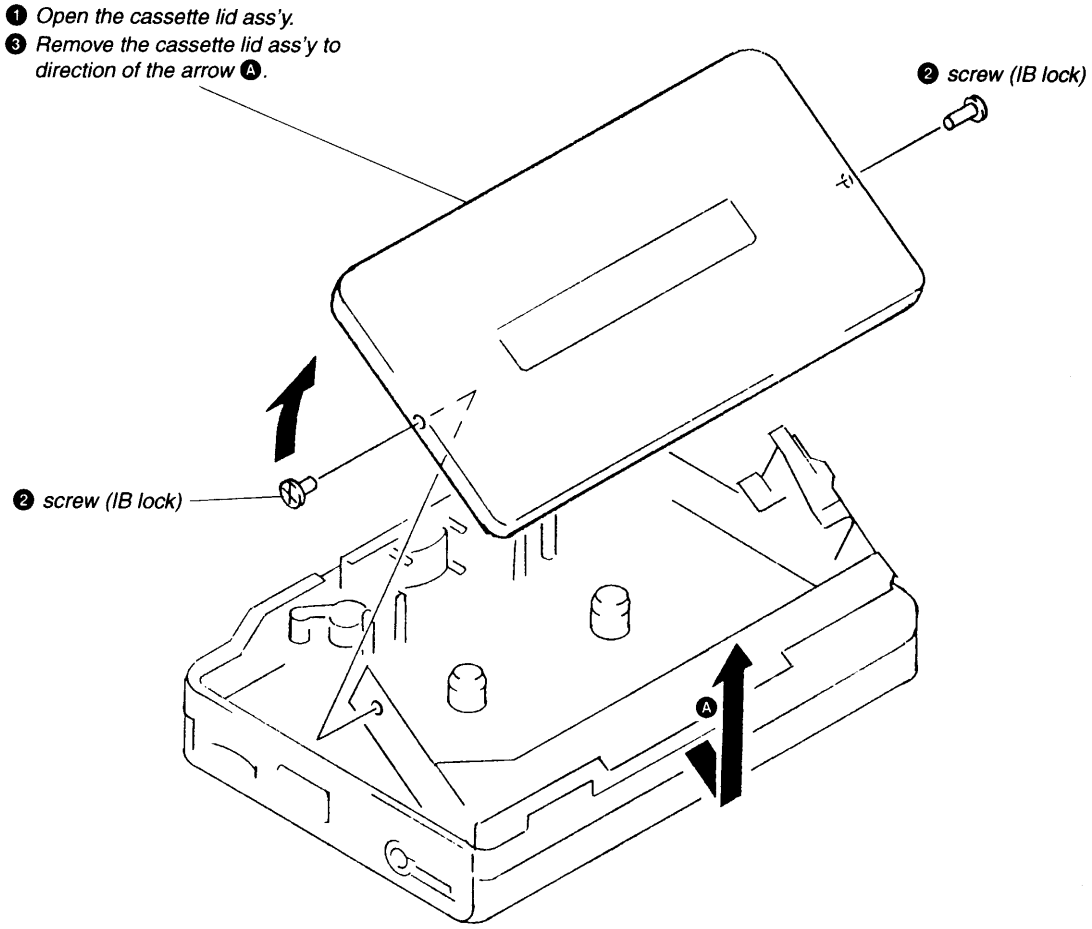
SECTION 3
DISASSEMBLY

• This set can be disassembled in the order shown below.

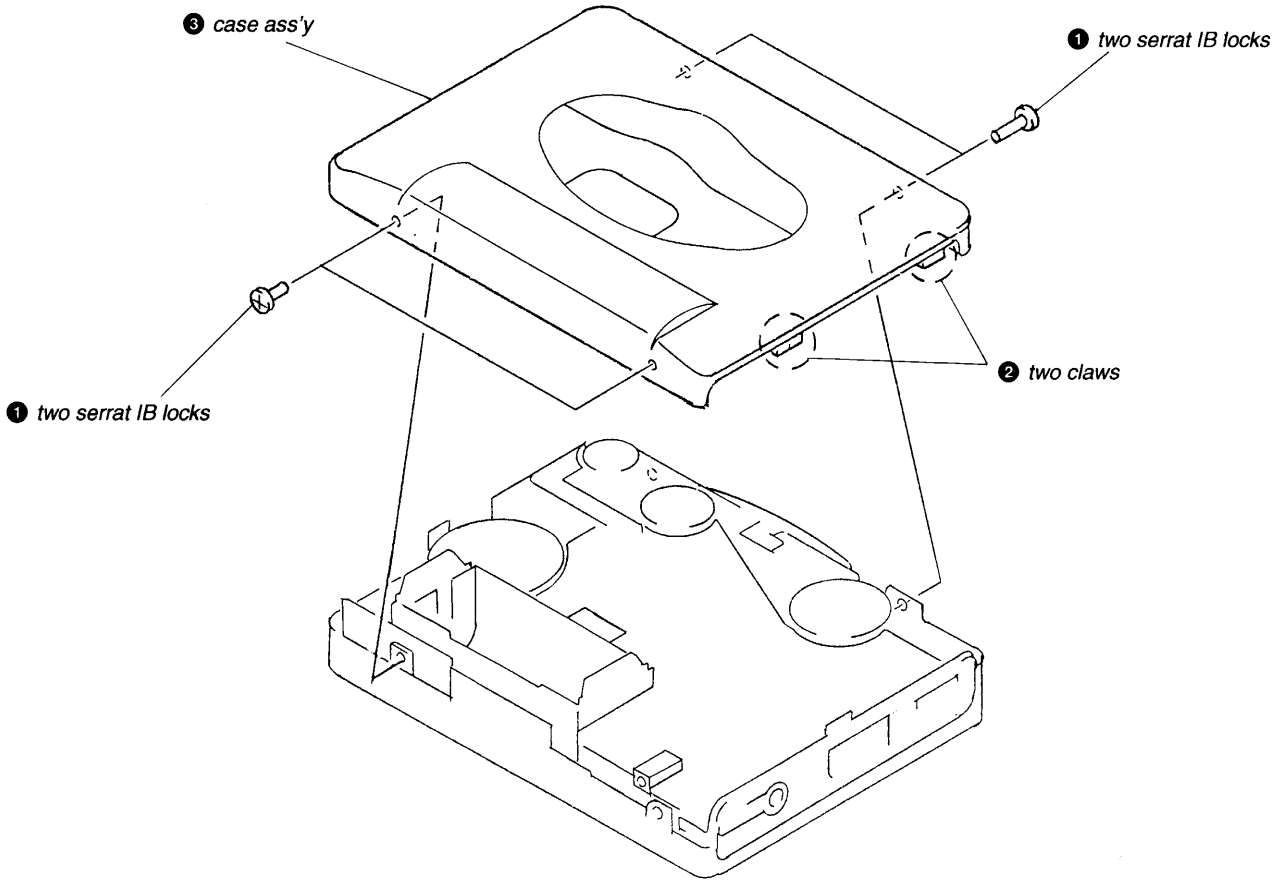

CASSETTE LID ASS'Y (Page 6)
CASE ASS'Y (Page 7)
REEL ORNAMENT (Page 7)
BATTERY HOLDER (Page 8)
MAIN BOARD, NOTE FOR INSTALLATON (Page 9)
BELT (Page 8)
MOTOR (M901) (Page 10)
MAGNETIC HEAD (HP901) (Page 10)

Note: Follow the disassembly procedure in the numerical order given.

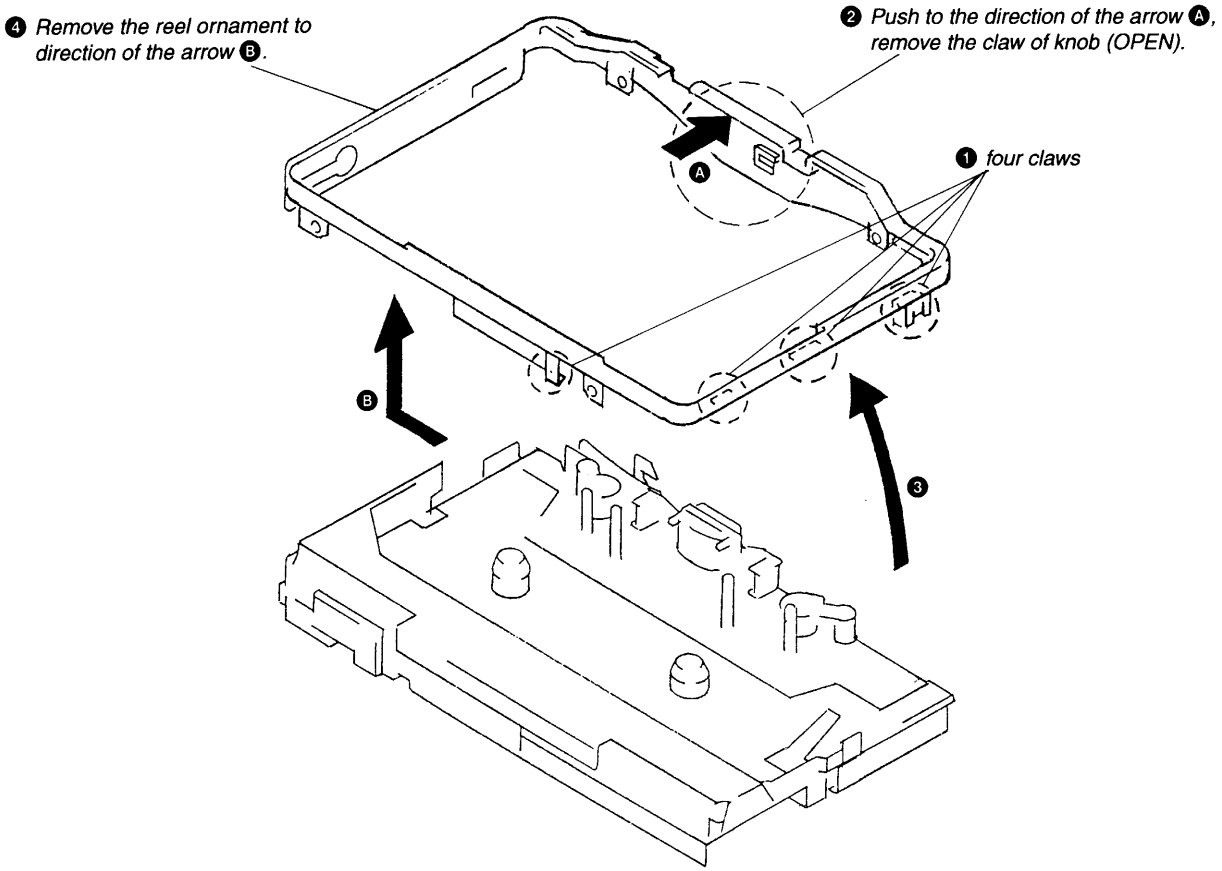
CASSETTE LID ASS'Y



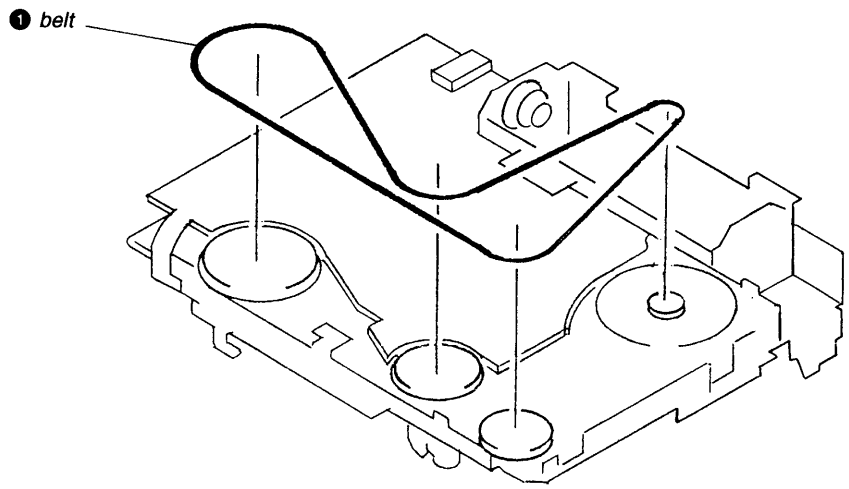
CASE ASS'Y



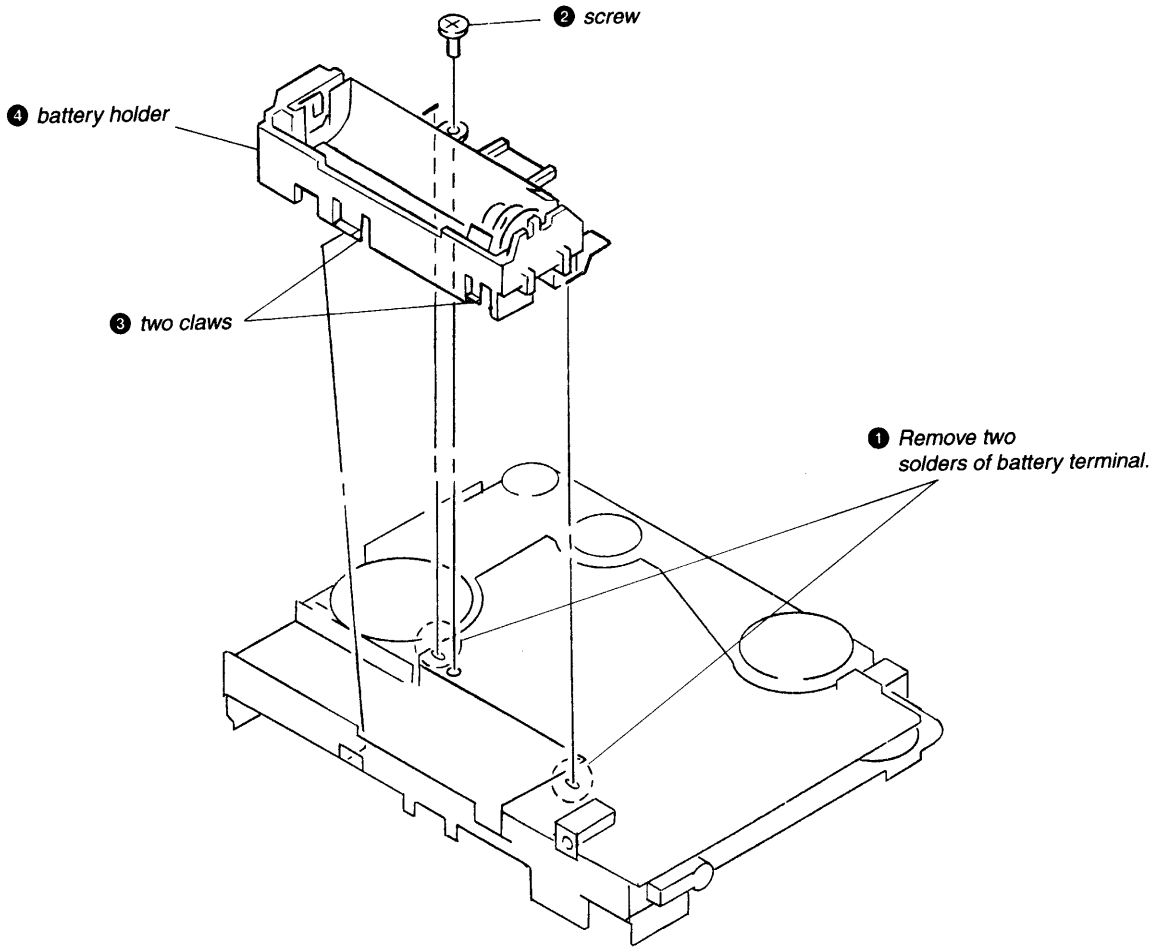
REEL ORNAMENT


❹ Remove the reel ornament to direction of the arrow Ⓑ.
❷ Push to the direction of the arrow Ⓐ, remove the claw of knob (OPEN).
❶ four claws
Ⓐ
Ⓑ
❸

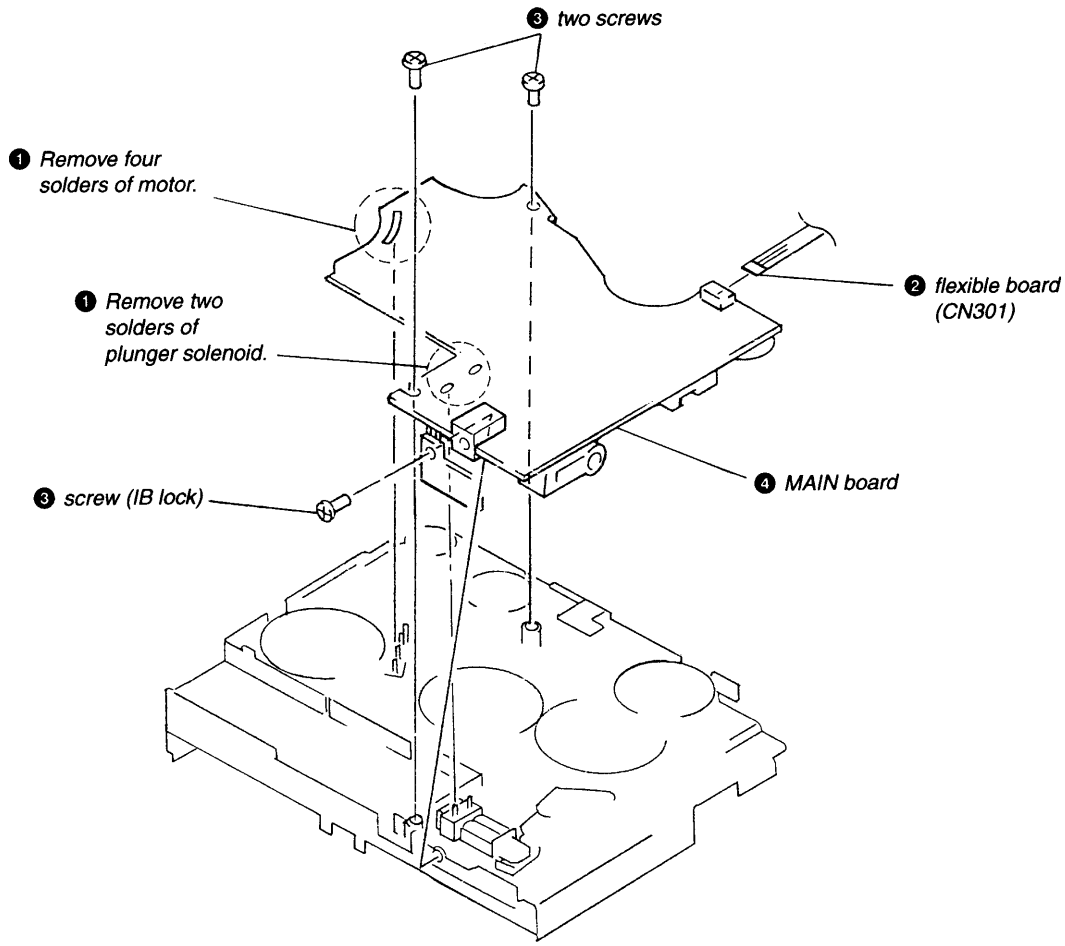
BELT



BATTERY HOLDER



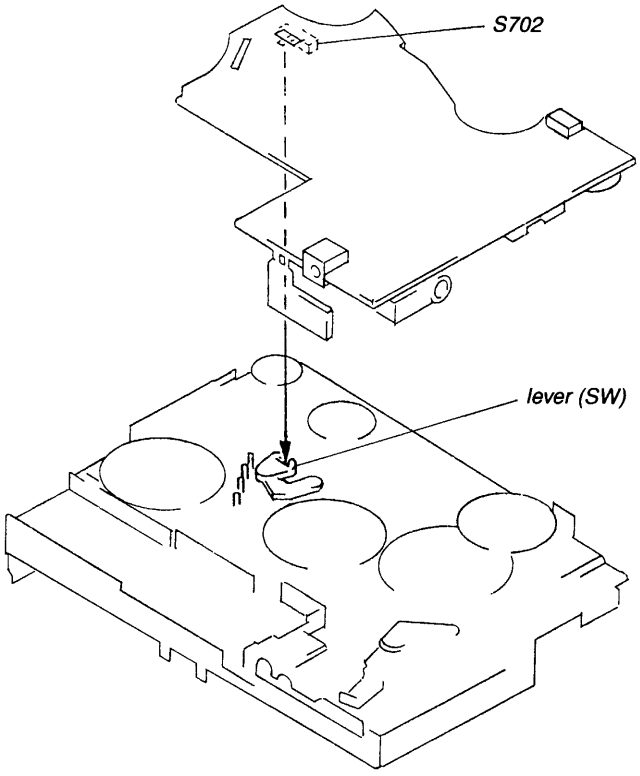
MAIN BOARD


❸ two screws
❶ Remove four solders of motor.
❶ Remove two solders of plunger solenoid.
❷ flexible board (CN301)
❸ screw (IB lock)
❹ MAIN board

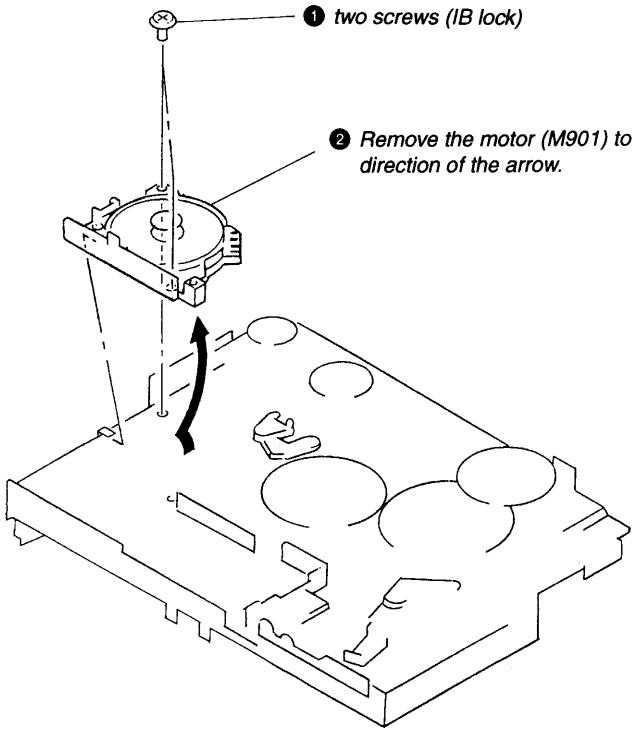
NOTE FOR INSTALLATION

• **MAIN BOARD**

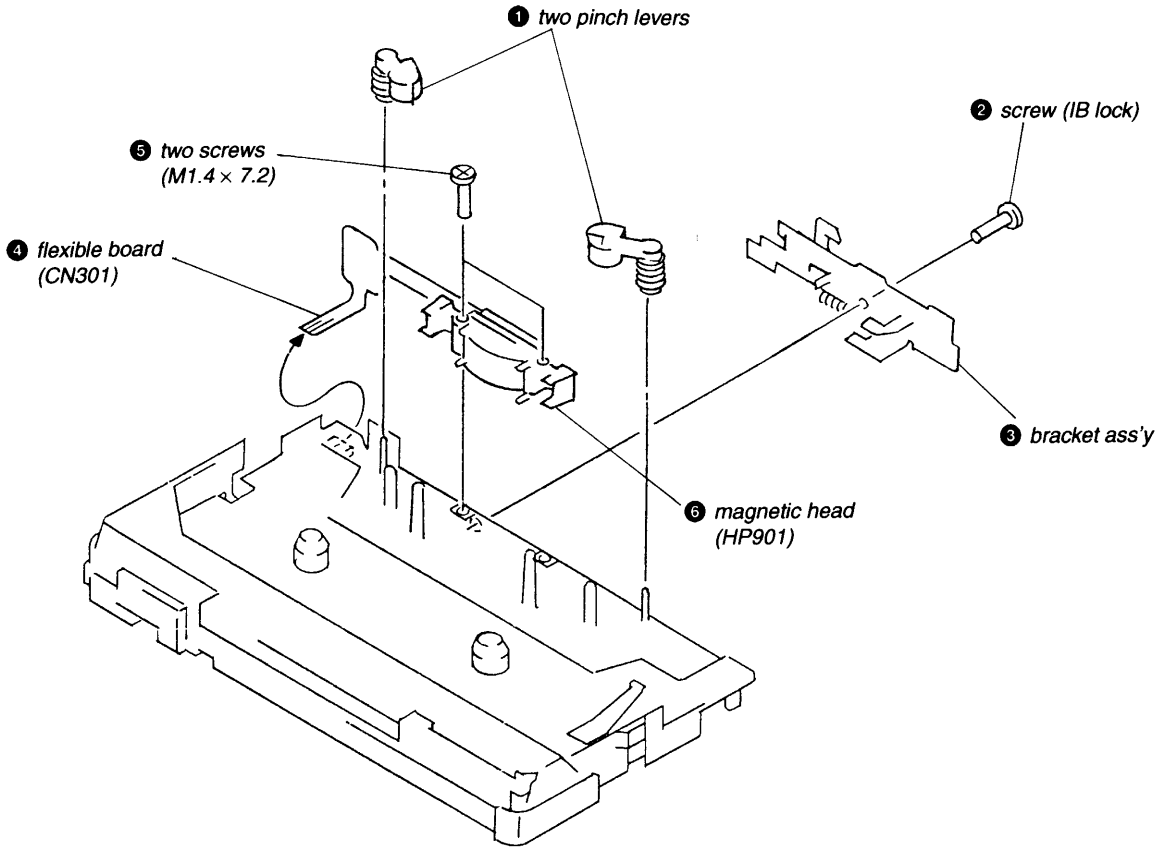
On installation MAIN board adjust the S702 and lever (SW)



MOTOR (M901)



MAGNETIC HEAD (HP901)



SECTION 4
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
   record/playback head　　pinch roller
   rubber belts　　capstan
2. Demagnetize the record/playback head with a head demagnetizer.
   (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage (1.3 V) unless otherwise noted.

Torque Measurement:

Mode	Torque meter	Meter reading
FWD	CQ-102C	18 – 30 g•cm (0.25 – 0.41 oz•inch)
FWD back tension		0.7 – 2.0 g•cm (0.006 – 0.027 oz•inch)
REV	CQ-102RC	18 – 30 g•cm (0.25 – 0.41 oz•inch)
REV back tension		0.7 – 2.0 g•cm (0.006 – 0.027 oz•inch)
FF	CQ-201B	more than 35g•cm (more than 0.49 oz•inch)
REW		

SECTION 5
ELECTRICAL ADJUSTMENTS

PRECAUTION

1. Specified voltage: 1.3 V.
2. Switch position
   DOLBY NR switch: OFF
   MEGA BASS switch: NORM

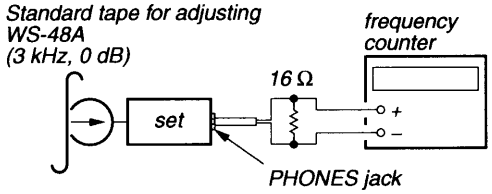
Cassette Section

Standard tape

Product name	Recorded contents	Purpose
WS-48A	3 kHz, 0 dB	For adjusting speed

[Tape Speed Adjustment]

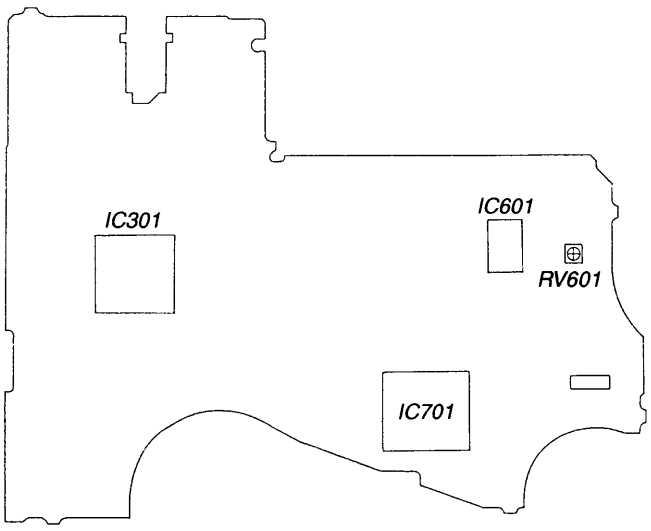
Procedure:



1. Playback WS-48A (tape center part) in the FWD state and adjust RV601 so that the frequency counter reading becomes 3000 ± 10 Hz.
2. Playback WS-48A (tape center) in the REV state.
   Check that the frequency counter reading is within 2.5 % of the reading of step 1.

Adjustment Point:

MAIN BOARD – Side B –



SECTION 6
DIAGRAMS

6-1. IC PIN FANCTION DESCRIPTION

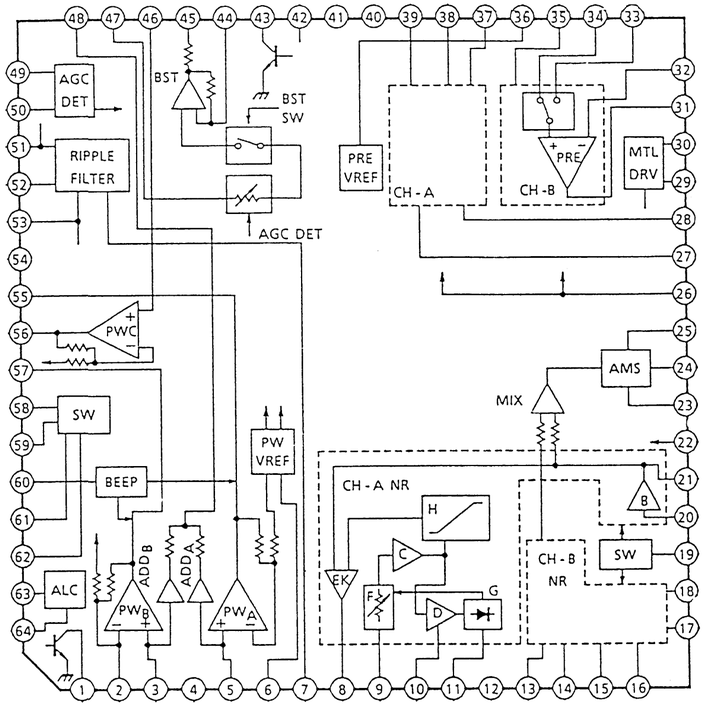
• MAIN BOARD IC701 MSM6576-79GS-K (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	M.CTL	O	The output terminal for the control signal to start the motor Turn the motor when set to "H"
2	M.DIR	O	The output terminal for selecting the rotating direction of the motor Turn the motor counterclockwise when set to "H", and clockwise when set to "L"
3	M.BRK	O	The output terminal for the brake signal to be applied to the motor Turn the brake on when set to "H"
4	RESET	I	System reset signal input from the reset signal generator (IC703) "H": reset
5	TEST1	I	The input terminal for the test (fixed at "L")
6	TEST2	I	
7	TEST3	I	
8	L.DOLBY	O	The output terminal for the LED drive signal of the DC NR indicator (D708) "H": LED on
9	L.AVLS	O	The output terminal for the LED drive signal of the AVLS indicator (D707) "H": LED on
10	L.BATT	O	The output terminal for the LED drive signal of the BATT indicator (D703) "H": LED on
11	L.BLSKIP	O	The output terminal for the LED drive signal of the BL SKIP indicator (D706) "H": LED on
12	MUTE CTL	O	The output terminal of the muting signal "L": mute on
13	PM CTL	O	The output terminal for the plunger drive signal "H": plunger on
14	PHOTO CTL	O	Control signal output to the motor rotation detect circuit "H": rotation detect circuit on
15	XTB	—	Connected to crystal oscillator (X701 32.768 kHz) for the system clock
16	XT	—	Connected to crystal oscillator (X701 32.768 kHz) for the system clock
17	VDD	—	Power supply terminal (+1.5V)
18	VSS1	—	Ground terminal
19	VCM	—	Increases power supply voltage
20	VCP	—	
21	VSS2	—	
22	VEE	—	
23	SET STOP1	I	Battery voltage detect input terminal Middle point voltage (+0.75V) input in this set
24	SET STOP2	I	Battery voltage detect input terminal
25	KEY IN	I	Key input terminal (A/D input)
26	HOLDER SW	I	Cassette holder open/close detect switch (S701) input "H": cassette holder close, "L": cassette holder open
27	BEEP	O	Beep sound signal output (frequency: 1.6 kHz)
28	AMS IN	I	AMS (Automatic Music Sensor) control signal input from the TA2072AF (IC301)
29	RMUM	I	Communication request signal input from the remote commander
30	DATA	O	Data output to the remote commander
31	DOLBY CTL	O	Dolby NR on/off control signal output to the TA2072AF (IC301) "H": dolby NR on
32	DDC CTL	O	Control signal output to the DC/DC converter circuit "H": power on
33	F/R CTL	O	FWD/REV select signal output to the TA2072AF (IC301) "H": FWD, "L": REV
34	L.MB	O	The output terminal for the LED drive signal of the SOUND MB indicator (D705) "H": LED on
35	L.GRV	O	The output terminal for the LED drive signal of the SOUND GRV indicator (D704) "H": LED on
36	FWD SW	I	Tape direction switch (S702) input "H": FWD
37	REV SW	I	Tape direction switch (S702) input "H": REV
38	PHOTO IN	I	Detect signal input from the motor rotation detect circuit

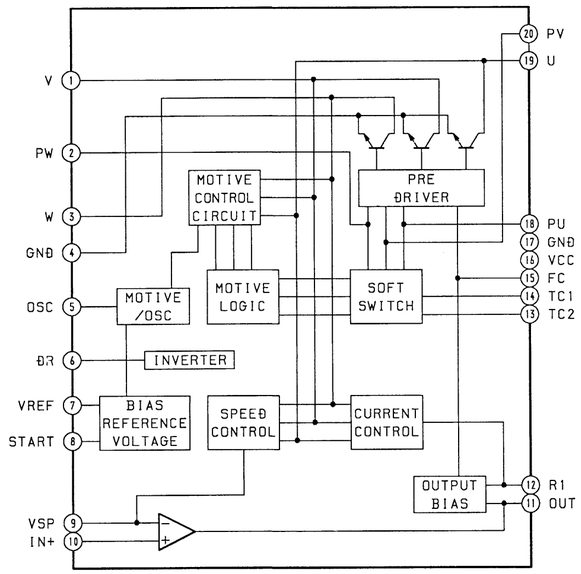
Pin No.	Pin Name	I/O	Function
39	VDD	—	Power supply terminal (+1.5V)
40	BOOST CTL	O	Boost on/off control signal output to the TA2072AF (IC301)
41	MB/GRV CTL	O	MEGA BASS/GROOVE select signal output to the TA2072AF (IC301)
42	LOAD CTL	O	Load control signal output terminal
43	AVLS CTL	O	AVLS (Automatic Volume Limiter System) on/off control signal input from the TA2072AF (IC301)
44	AMP CTL	O	Amp control signal output to the TA2072AF (IC301)

• IC Block Diagrams

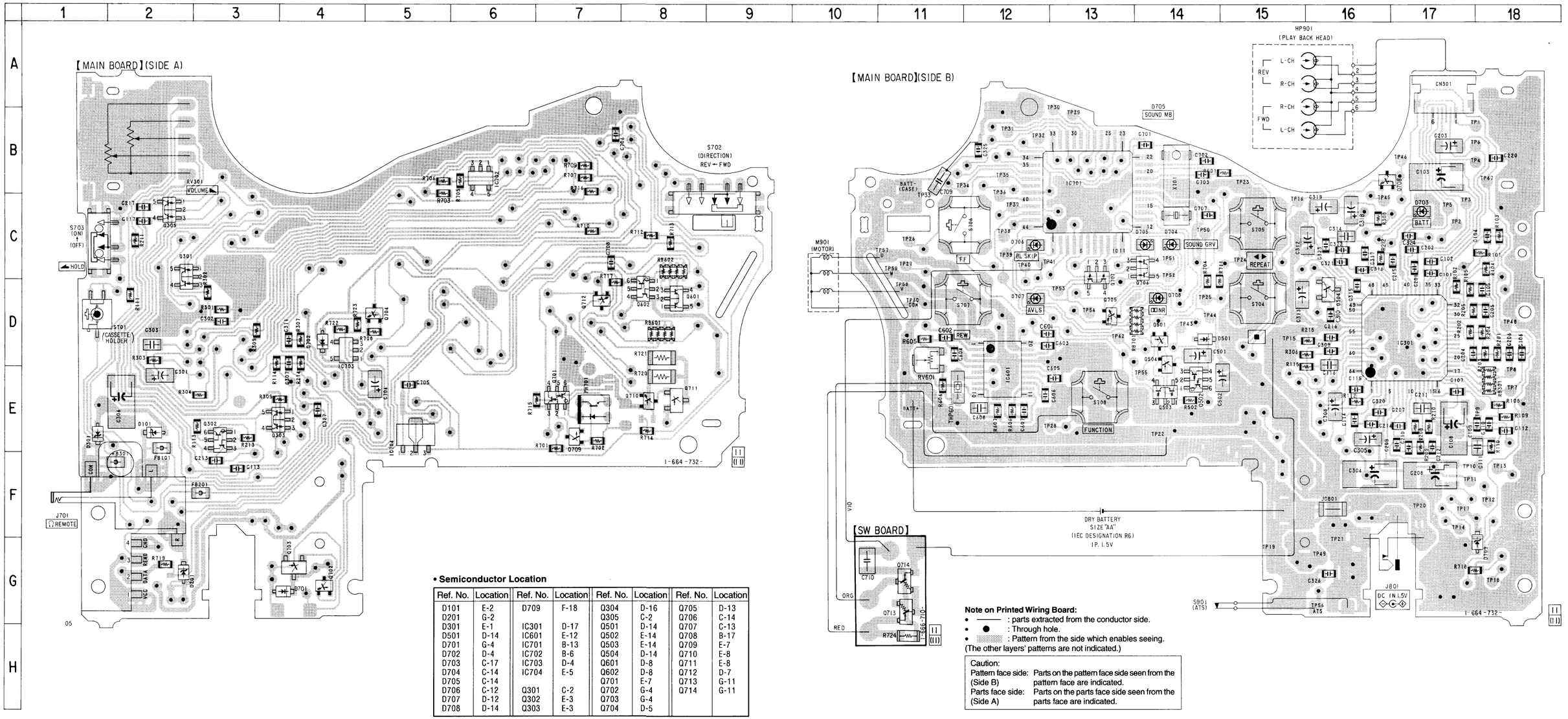
IC301 TA2072AF



IC601 MM1279XVBE



6-2. PRINTED WIRING BOARD



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	E-2	D709	F-18	Q304	D-16	Q705	D-13
D201	G-2			Q305	C-2	Q706	C-14
D301	E-1	IC301	D-17	Q501	D-14	Q707	C-13
D501	D-14	IC601	E-12	Q502	E-14	Q708	B-17
D701	G-4	IC701	B-13	Q503	E-14	Q709	E-7
D702	D-4	IC702	B-6	Q504	D-14	Q710	E-8
D703	C-17	IC703	D-4	Q601	D-8	Q711	E-8
D704	C-14	IC704	E-5	Q602	D-8	Q712	D-7
D705	C-14			Q701	E-7	Q713	G-11
D706	C-12	Q301	C-2	Q702	G-4	Q714	G-11
D707	D-12	Q302	E-3	Q703	G-4		
D708	D-14	Q303	E-3	Q704	D-5		

Note on Printed Wiring Board:
- ——— : parts extracted from the conductor side.
- ● : Through hole.
- ▒▒▒ : Pattern from the side which enables seeing.

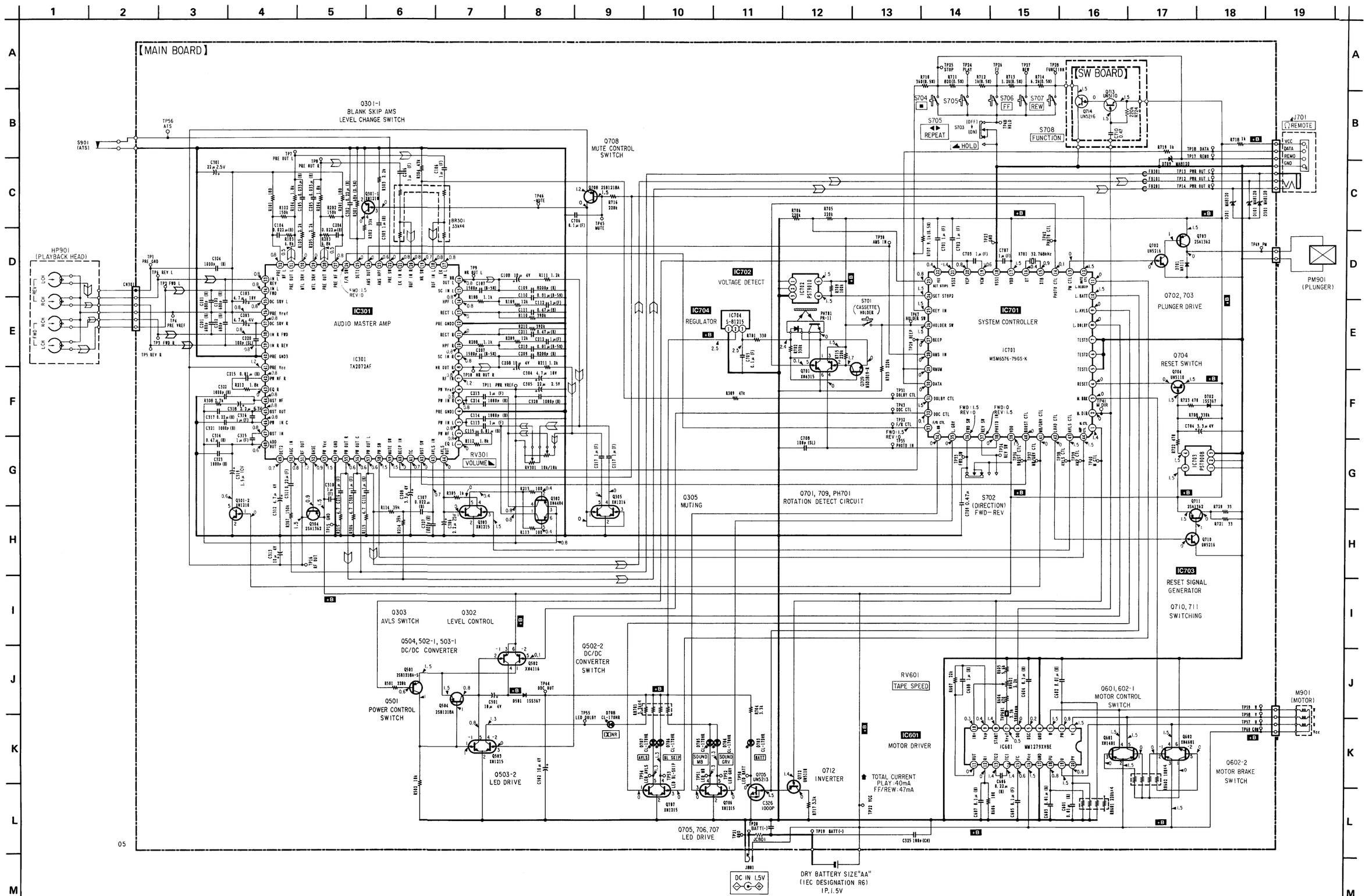
(The other layers' patterns are not indicated.)

Caution:
Pattern face side: (Side B) Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A) Parts on the parts face side seen from the parts face are indicated.

Note on Schematic Diagram:

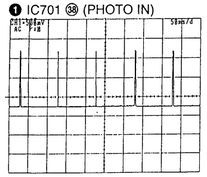
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.
- B+ : B+ Line.
- ▬ : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 1.5 V and fed with regulated dc power supply from battery terminal.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▷ : PB

6-3. SCHEMATIC DIAGRAM • See page 14, 15 for IC Block Diagrams.

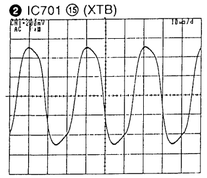


• Waveforms

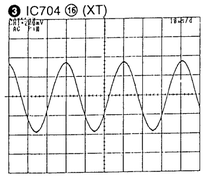
❶ IC701 ㊳ (PHOTO IN)



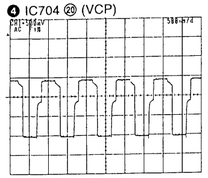
❷ IC701 ⑮ (XTB)



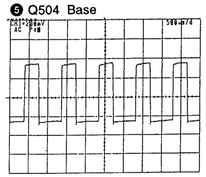
❸ IC704 ⑯ (XT)



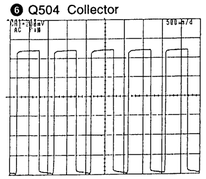
❹ IC704 ㉘ (VCP)



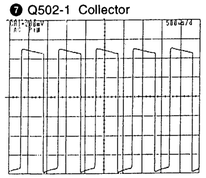
❺ Q504 Base



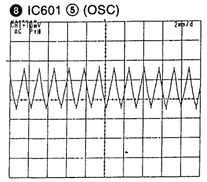
❻ Q504 Collector



❼ Q502-1 Collector



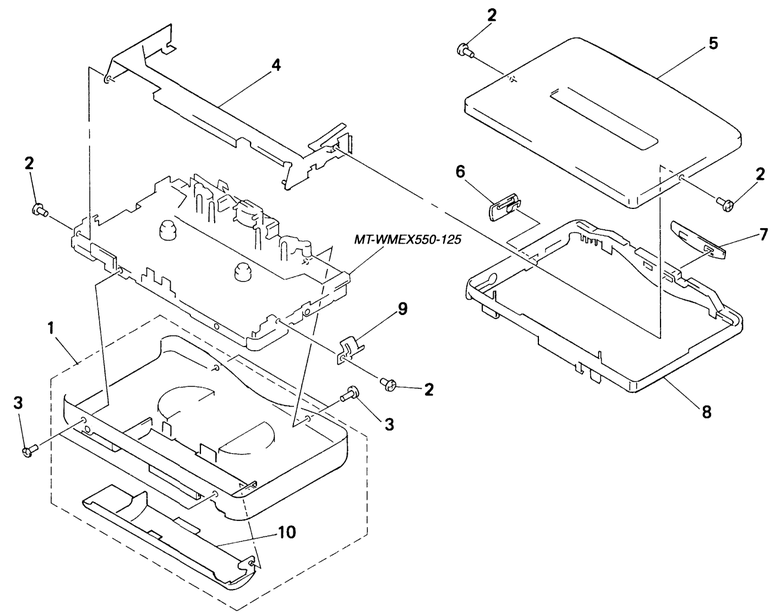
❽ IC601 ⑤ (OSC)



SECTION 7
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of the electrical parts list.

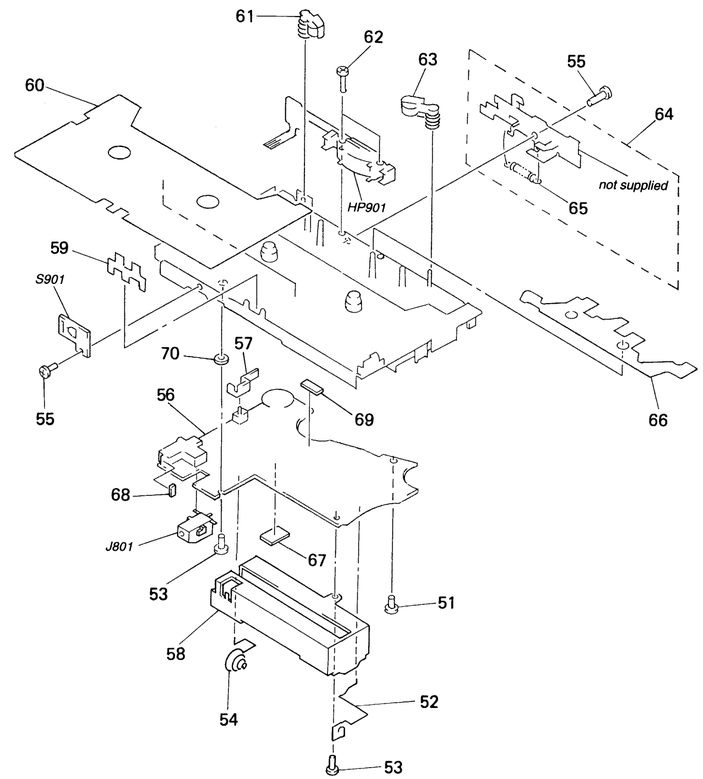
(1) CASE SECTION



Ref.No.	Part No.	Description	Remark
1	X-3373-175-1	CASE ASSY (B) (for BLACK) (EX550)	
1	X-3373-186-1	CASE ASSY (S) (for SILVER) (EX550)	
1	X-3373-187-1	CASE ASSY (L) (for BLUE) (EX550)	
1	X-3373-188-1	CASE ASSY (H) (EX552)	
2	3-704-197-01	SCREW (IB LOCK)	
3	3-010-838-24	LOCK, SERRAT IB	
4	X-3373-173-1	HOLDER ASSY, CASSETTE	
5	X-3373-174-1	LID ASSY (B), CASSETTE (for BLACK) (EX550)	
5	X-3373-179-1	LID ASSY (S), CASSETTE (for SILVER) (EX550)	
5	X-3373-180-1	LID ASSY (L), CASSETTE (for BLUE) (EX550)	
5	X-3373-181-1	LID ASSY (H), CASSETTE (EX552)	

Ref.No.	Part No.	Description	Remark
6	3-930-794-11	KNOB (HOLD) (EX550)	
6	3-930-794-21	KNOB (HOLD) (EX552)	
7	3-009-677-01	KNOB (OPEN)	
8	3-009-676-01	ORNAMENT, REEL (EX550)	
8	3-009-676-11	ORNAMENT, REEL (EX552)	
9	3-009-668-01	PLATE, C LOCK	
10	3-009-681-01	LID, BATTERY CASE (for BLACK) (EX550)	
10	3-009-681-11	LID, BATTERY CASE (for SILVER) (EX550)	
10	3-009-681-21	LID, BATTERY CASE (for BLUE) (EX550)	
10	3-009-681-31	LID, BATTERY CASE (EX552)	

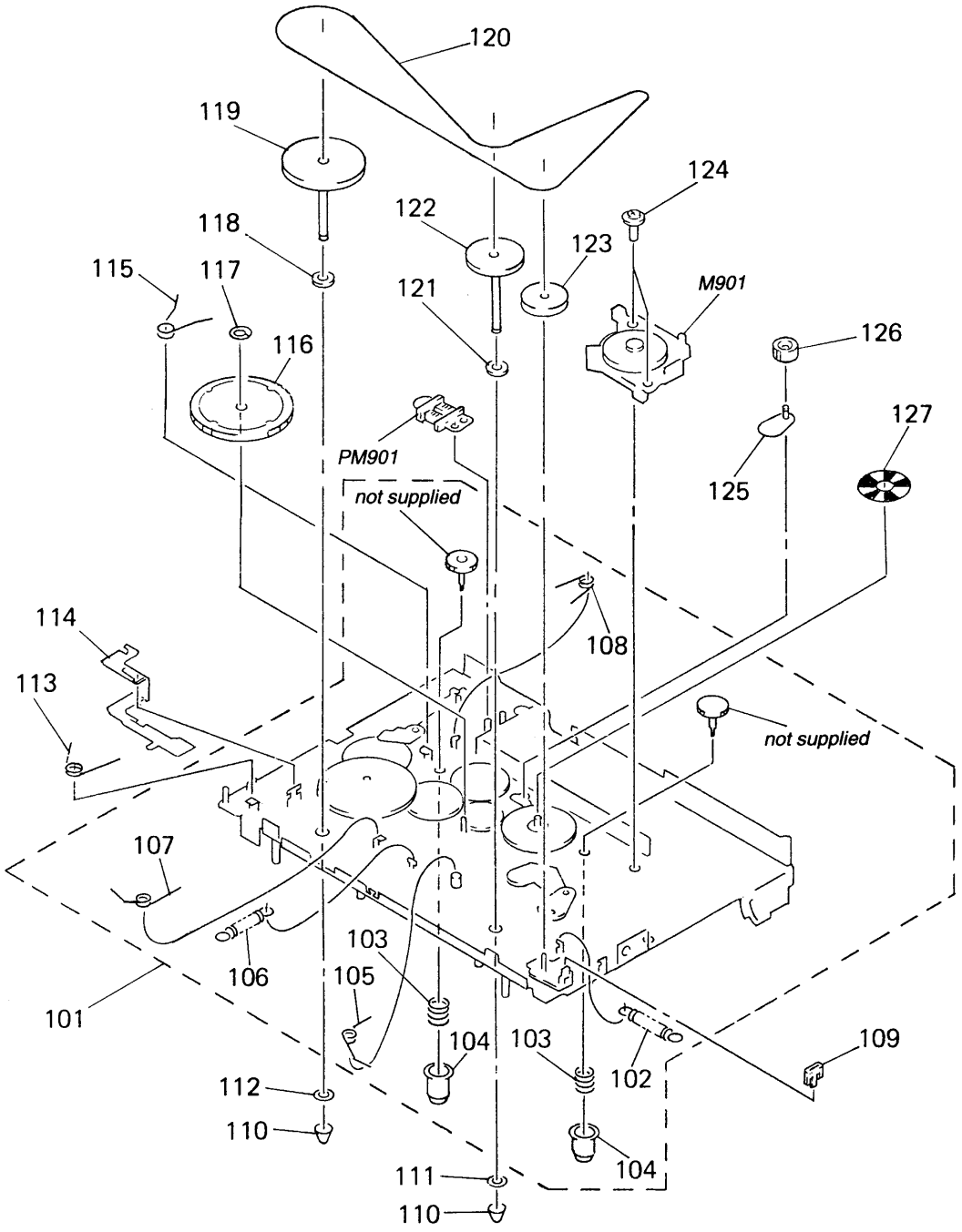
(2) MAIN BOARD SECTION



Ref.No.	Part No.	Description	Remark
51	3-010-838-24	LOCK, SERRAT IB	
52	3-009-669-01	TERMINAL (+), BATTERY	
53	3-375-114-11	SCREW	
54	3-009-670-01	TERMINAL (-), BATTERY	
55	3-704-197-01	SCREW (IB LOCK)	
56	A-3061-413-A	MAIN BOARD, COMPLETE	
57	3-010-520-01	COVER, SW	
58	3-009-675-01	HOLDER, BATTERY	
59	3-928-465-01	DETENT, CASSETTE	
60	3-009-662-01	COVER (A), MD (EX550:E/EX552:E, Tourist)	
60	3-009-662-11	COVER (A), MD (AEP)	
61	X-3372-850-1	PINCH LEVER (N) ASSY	

Ref.No.	Part No.	Description	Remark
62	3-704-413-31	SCREW (M1.4X7.2)	
63	X-3372-849-1	PINCH LEVER (R) ASSY	
64	X-3373-172-1	BRACKET ASSY	
65	3-009-667-01	SPRING, TENSION	
66	3-011-277-01	COVER (B) (Y), MD	
* 67	1-666-710-11	SW BOARD	
68	3-015-312-01	SHEET (HP)	
69	3-328-483-01	SHEET	
70	3-015-313-01	SHEET	
HP901	1-500-420-11	HEAD, MAGNETIC (PLAYBACK)	
J801	1-779-080-11	JACK, DC (POLARITY UNIFIED TYPE)	(DC IN 1.5V)
S901	1-762-793-11	SWITCH, LEAF	

(3) MECHANISM DECK SECTION (MT-WMEX550-125)



Ref. No.	Part No.	Description	Remark
101	X-3373-245-1	CHASSIS (S) ASSY (Y)	
102	3-007-457-01	SPRING (TEN), TENSION	
103	3-010-954-01	SPRING (BT), COMPRESSION	
104	3-010-274-01	TABLE, REEL	
105	3-007-455-01	SPRING (R), TORSION	
106	3-007-458-01	SPRING (H/B), TENSION	
107	3-007-456-01	SPRING (N), TORSION	
108	3-007-454-01	SPRING (FR), TORSION	
* 109	3-010-272-01	BELT, RETAINER	
110	3-366-017-01	BUSHING (CAPSTAN)	
111	3-007-429-01	WASHER (R), STOPPER	
112	3-918-943-01	WASHER, STOPPER	
113	3-007-960-01	SPRING (EJECT) (Y), TORSION	
114	3-007-439-01	SLIDER (LOCK)	
115	3-007-436-01	SPRING (TRIGGER), TORSION	

Ref. No.	Part No.	Description	Remark
116	X-3372-848-1	CLUTCH ASSY (M)	
117	3-932-724-21	WASHER	
118	3-386-694-01	WASHER	
119	X-3372-852-1	FLYWHEEL (N) ASSY	
120	3-007-430-01	BELT	
121	3-007-428-01	WASHER (R)	
122	X-3372-851-1	FLYWHEEL (R) ASSY	
123	3-007-434-01	PULLEY (REVERSE)	
124	3-007-427-01	SCREW (IB LOCK)	
125	X-3372-853-1	LEVER (FRG) ASSY	
126	3-007-435-01	GEAR (FR)	
127	3-007-432-01	SHEET (R), REFLECTION	
M901	1-698-885-11	MOTOR (CAPSTAN/REEL)	
PM901	1-454-674-31	SOLENOID, PLUNGER	

MAIN

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA . . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. . uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-3061-413-A	MAIN BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C102	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C103	1-128-024-11	SOLID CHIP	4.7uF	20%	10V
C104	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C105	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C106	1-115-156-11	CERAMIC CHIP	1uF		10V
C107	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C108	1-128-014-11	SOLID CHIP	10uF	20%	4V
C109	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V
C110	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C111	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C112	1-115-156-11	CERAMIC CHIP	1uF		10V
C113	1-115-156-11	CERAMIC CHIP	1uF		10V
C114	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C115	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C116	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C117	1-115-156-11	CERAMIC CHIP	1uF		10V
C201	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C202	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C203	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C204	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C205	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C206	1-115-156-11	CERAMIC CHIP	1uF		10V
C207	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C208	1-128-014-11	SOLID CHIP	10uF	20%	4V
C209	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V
C210	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C211	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C212	1-115-156-11	CERAMIC CHIP	1uF		10V
C213	1-115-156-11	CERAMIC CHIP	1uF		10V
C214	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C215	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C216	1-115-156-11	CERAMIC CHIP	1uF		10V
C217	1-115-156-11	CERAMIC CHIP	1uF		10V
C220	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C301	1-135-316-11	TANTAL. CHIP	22uF	20%	2.5V
C302	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C303	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C303	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C304	1-128-024-11	SOLID CHIP	4.7uF	20%	10V
C305	1-135-316-11	TANTAL. CHIP	22uF	20%	2.5V
C306	1-110-423-11	SOLID CHIP	2.2uF	20%	25V
C307	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C308	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C309	1-115-156-11	CERAMIC CHIP	1uF		10V
C310	1-115-156-11	CERAMIC CHIP	1uF		10V
C311	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C312	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C314	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C315	1-115-156-11	CERAMIC CHIP	1uF		10V
C316	1-115-156-11	CERAMIC CHIP	1uF		10V
C317	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C318	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C319	1-107-688-11	TANTAL. CHIP	1.5uF	20%	10V
C320	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C321	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C322	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C323	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C324	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C325	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C326	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C327	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C501	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C502	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C601	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C602	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C603	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C604	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C605	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C606	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C607	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C608	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C701	1-115-156-11	CERAMIC CHIP	1uF		10V
C702	1-115-156-11	CERAMIC CHIP	1uF		10V
C703	1-115-156-11	CERAMIC CHIP	1uF		10V
C704	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C705	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C706	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C707	1-115-156-11	CERAMIC CHIP	1uF		10V
C708	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C709	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
		< CONNECTOR >			
CN301	1-766-336-21	CONNECTOR, FFC/FPC 6P			

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D101	8-719-423-35	DIODE MA8120-H	
D201	8-719-423-35	DIODE MA8120-H	
D301	8-719-423-35	DIODE MA8120-H	
D501	8-719-049-09	DIODE 1SS367-T3SONY	
D701	8-719-404-49	DIODE MA111	
D702	8-719-049-09	DIODE 1SS367-T3SONY	
D703	8-719-051-01	DIODE CL-170HR-CD-T	
D704	8-719-051-01	DIODE CL-170HR-CD-T	
D705	8-719-051-01	DIODE CL-170HR-CD-T	
D706	8-719-051-01	DIODE CL-170HR-CD-T	
D707	8-719-051-01	DIODE CL-170HR-CD-T	
D708	8-719-051-01	DIODE CL-170HR-CD-T	
D709	8-719-423-35	DIODE MA8120-H	
		< FERRITE BEAD >	
FB101	1-414-235-11	INDUCTOR, FERRITE BEAD	
FB201	1-414-235-11	INDUCTOR, FERRITE BEAD	
FB301	1-414-235-11	INDUCTOR, FERRITE BEAD	
		< IC >	
IC301	8-759-359-76	IC TA2072AF	
IC601	8-759-356-46	IC MM1279XVBE	
IC701	8-759-450-43	IC MSM6576-79GS-K	
IC702	8-759-280-85	IC PST9010NL	
IC703	8-759-430-08	IC PST9008NL	
IC704	8-759-515-82	IC S-81215AG-RK-S	
		< JACK >	
J701	1-778-930-21	JACK 7P (Ω REMOTE)	
		< JUMPER RESISTOR >	
JC801	1-216-296-91	CONDUCTOR, CHIP (3216)	
		< PHOTO INTERRUPTER >	
PH701	8-719-988-15	PHTO REFLECTOR PR-11-C	
		< TRANSISTOR >	
Q301	8-729-022-66	TRANSISTOR XN1210-TX	
Q302	8-729-422-39	TRANSISTOR XN4404	
Q303	8-729-403-17	TRANSISTOR XN1215	
Q304	8-729-230-72	TRANSISTOR 2SA1362YG	
Q305	8-729-421-23	TRANSISTOR XN1216	
Q501	8-729-420-24	TRANSISTOR 2SB1218A-QRS	
Q502	8-729-115-28	TRANSISTOR BN1L3Z-K	
Q503	8-729-403-17	TRANSISTOR XN1215	
Q504	8-729-420-24	TRANSISTOR 2SB1218A-QRS	
Q601	8-729-403-42	TRANSISTOR XN1401	
Q602	8-729-402-84	TRANSISTOR XN4601	
Q701	8-729-422-18	TRANSISTOR XN4315	
Q702	8-729-421-26	TRANSISTOR UN5216	
Q703	8-729-230-72	TRANSISTOR 2SA1362YG	
Q704	8-729-422-51	TRANSISTOR UN5110-QRS	
Q705	8-729-402-42	TRANSISTOR UN5213	
Q706	8-729-403-17	TRANSISTOR XN1215	
Q707	8-729-403-17	TRANSISTOR XN1215	
Q708	8-729-420-24	TRANSISTOR 2SB1218A-QRS	
Q709	8-729-030-53	TRANSISTOR MSD1819A-RT1	
Q710	8-729-421-26	TRANSISTOR UN5216	
Q711	8-729-230-72	TRANSISTOR 2SA1362YG	
Q712	8-729-422-51	TRANSISTOR UN5110-QRS	
		< RESISTOR >	
R101	1-216-812-11	METAL CHIP 180 5% 1/16W	
R102	1-216-847-11	METAL CHIP 150K 5% 1/16W	
R103	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R104	1-216-824-11	METAL CHIP 1.8K 5% 1/16W	
R105	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R108	1-218-270-11	METAL GLAZE 1.1K 5% 1/16W	
R109	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R110	1-216-852-11	METAL CHIP 390K 5% 1/16W	
R111	1-216-822-11	METAL CHIP 1.2K 5% 1/16W	
R112	1-216-824-11	METAL CHIP 1.8K 5% 1/16W	
R113	1-216-809-11	METAL CHIP 100 5% 1/16W	
R114	1-216-840-11	METAL CHIP 39K 5% 1/16W	
R115	1-216-793-11	METAL GLAZE 4.7 5% 1/16W	
R201	1-216-812-11	METAL CHIP 180 5% 1/16W	
R202	1-216-847-11	METAL CHIP 150K 5% 1/16W	
R203	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R204	1-216-824-11	METAL CHIP 1.8K 5% 1/16W	
R205	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R208	1-218-270-11	METAL GLAZE 1.1K 5% 1/16W	
R209	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R210	1-216-852-11	METAL CHIP 390K 5% 1/16W	
R211	1-216-822-11	METAL CHIP 1.2K 5% 1/16W	
R212	1-216-824-11	METAL CHIP 1.8K 5% 1/16W	
R213	1-216-809-11	METAL CHIP 100 5% 1/16W	
R214	1-216-840-11	METAL CHIP 39K 5% 1/16W	
R215	1-216-793-11	METAL GLAZE 4.7 5% 1/16W	
R301	1-218-891-11	METAL GLAZE 68K 0.5% 1/16W	
R302	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R303	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R304	1-218-295-11	METAL GLAZE 43K 5% 1/16W	
R305	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R306	1-216-793-11	METAL GLAZE 4.7 5% 1/16W	
R307	1-216-847-11	METAL CHIP 150K 5% 1/16W	
R308	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	
R309	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R501	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R502	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R604	1-216-810-11	METAL CHIP 470 5% 1/16W	
R605	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R606	1-216-809-11	METAL CHIP 100 5% 1/16W	

MAIN **SW**

Ref. No.	Part No.	Description			Remark
R607	1-216-837-11	METAL CHIP	22K	5%	1/16W
R701	1-216-815-11	METAL CHIP	330	5%	1/16W
R702	1-216-851-11	METAL CHIP	330K	5%	1/16W
R703	1-216-849-11	METAL CHIP	220K	5%	1/16W
R704	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R705	1-216-849-11	METAL CHIP	220K	5%	1/16W
R706	1-216-849-11	METAL CHIP	220K	5%	1/16W
R707	1-218-870-11	METAL GLAZE	9.1K	0.5%	1/16W
R708	1-216-851-11	METAL CHIP	330K	5%	1/16W
R709	1-216-845-11	METAL CHIP	100K	5%	1/16W
R710	1-218-836-11	METAL GLAZE	360	0.5%	1/16W
R711	1-218-845-11	METAL GLAZE	820	0.5%	1/16W
R712	1-218-847-11	METAL GLAZE	1K	0.5%	1/16W
R713	1-218-849-11	METAL GLAZE	1.2K	0.5%	1/16W
R714	1-218-866-11	METAL GLAZE	6.2K	0.5%	1/16W
R715	1-216-849-11	METAL CHIP	220K	5%	1/16W
R716	1-216-849-11	METAL CHIP	220K	5%	1/16W
R717	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R718	1-216-821-11	METAL CHIP	1K	5%	1/16W
R719	1-216-821-11	METAL CHIP	1K	5%	1/16W
R720	1-216-162-11	METAL CHIP	33	5%	1/16W
R721	1-216-162-11	METAL CHIP	33	5%	1/16W
R722	1-216-817-11	METAL CHIP	470	5%	1/16W
R723	1-216-817-11	METAL CHIP	470	5%	1/16W
		< CONPOSITION CIRCUIT BLOCK >			
RB301	1-233-872-21	RES, NETWORK (CHIP TYPE) 33Kx4			
RB601	1-233-873-21	RES, NETWORK (CHIP TYPE) 220Kx4			
RB602	1-233-576-11	RES, CHIP NETWORK 100x4			
RB701	1-233-418-11	RES, CHIP NETWORK 3.3Kx4 (3216)			
		< VARIABLE RESISTOR >			
RV301	1-225-342-11	RES, VAR, CARBON 10K/10K (VOLUME►)			
RV601	1-223-576-11	RES, ADJ, METAL GLAZE 2.2K (TAPE SPEED)			
		< SWITCH >			
S701	1-762-970-21	SWITCH, PUSH (1 KEY) (CASSETTE HOLDER)			
S702	1-572-581-11	SWITCH, SLIDE (DIRECTION)			
S703	1-572-922-11	SWITCH, SLIDE (←HOLD)			
S704	1-692-453-11	SWITCH, KEY BOARD (■)			
S705	1-692-453-11	SWITCH, KEY BOARD (◄►REPEAT)			
S706	1-692-453-11	SWITCH, KEY BOARD (FF)			
S707	1-692-453-11	SWITCH, KEY BOARD (REW)			
S708	1-692-453-11	SWITCH, KEY BOARD (FUNCTION)			
		< THERMISTOR (POSITIVE) >			
THP601	1-810-794-11	THERMISTOR, POSITIVE (3.3K 3900ppm)			
		< VIBRATOR >			
X701	1-760-872-11	VIBRATOR, CRYSTAL (32.768KHz)			

****

Ref. No.	Part No.	Description	Remark
	1-666-710-11	SW BOARD	
		********	
		< CAPACITOR >	
C710	1-107-823-11	CERAMIC CHIP 0.47uF 10%	16V
		< TRANSISTOR >	
Q713	8-729-422-51	TRANSISTOR UN5110-QRS	
Q714	8-729-421-26	TRANSISTOR UN5216	
		< RESISTOR >	
R724	1-216-849-11	METAL CHIP 220K 5%	1/16W

****

MISCELLANEOUS

****

HP901	1-500-420-11	HEAD, MAGNETIC (PLAYBACK)
J801	1-779-080-11	JACK, DC (POLARITY UNIFIED TYPE) (DC IN 1.5V)
M901	1-698-885-11	MOTOR (CAPSTAN/REEL)
PM901	1-454-674-31	SOLENOID, PLUNGER
S901	1-762-793-11	SWITCH, LEAF

****

ACCESSORIES & PACKING MATERIALS

****

1-505-535-11	HEADPHONE (WITH REMOCON) (EX552)
1-528-465-11	BATTERY CHARGER (BC-820T) (EX552:Tourist)
1-569-007-11	ADAPTOR, CONVERSION 2P (EX552:Tourist)
3-858-909-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH)
3-858-909-21	MANUAL, INSTRUCTION (FRENCH, GERMAN, ITALIAN) (AEP)
3-858-909-31	MANUAL, INSTRUCTION (DUTCH, SWEDISH, PORTUGUESE) (AEP)
3-858-909-41	MANUAL, INSTRUCTION (CHINESE, KOREAN) (EX550:E/EX552:E, Tourist)
3-918-892-01	CASE, CARRYING
3-918-937-01	CASE, CARRYING
3-920-201-01	CLIP (EX552)
8-953-187-90	HEADPHONE MDR-ED136//K SET (EX550)

97D0569-1
Printed in Japan © 1997. 4
Published by Quality Engineering Dept. (Shibaura)

WM-EX550/EX552

SONY

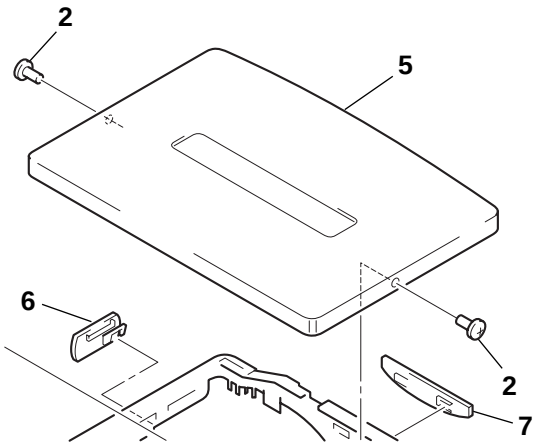
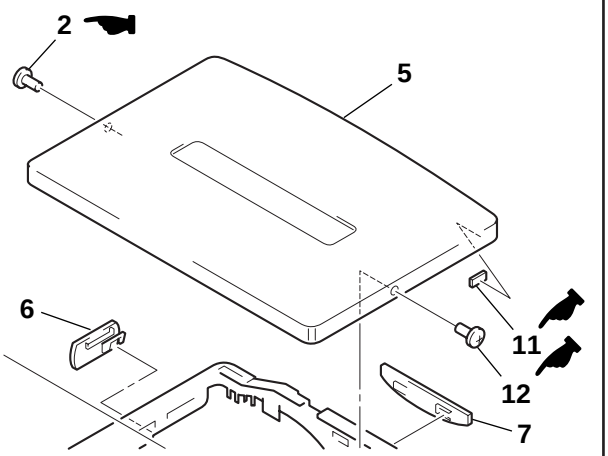
SERVICE MANUAL

AEP Model
E Model
WM-EX550/EX552
Tourist Model
WM-EX552

CORRECTION-1

Correct your service manual as shown below.

☛ **: indicates corrected portion.**

Page	INCORRECT	CORRECT
23		

Ref. No.	Part No.	Description	Remark
2	3-704-197-01	SCREW (IB LOCK)	

Ref. No.	Part No.	Description	Remark
2	3-704-197-01	SCREW 1.4X1.6 (S) (for SILVER, BLUE) (EX550)	
2	3-704-197-01	SCREW 1.4X1.6 (S) (EX552)	
2	3-704-197-03	SCREW 1.4X1.6 (B) (for BLACK) (EX550)	
11	3-015-995-01	SPACER (CASSETTE)	
12	3-389-523-15	SCREW 1.4X2 (S) (for SILVER, BLUE) (EX550)	
12	3-389-523-15	SCREW 1.4X2 (S) (EX552)	
12	3-389-523-16	SCREW 1.4X2 (B) (for BLACK) (EX550)	

(SPM-97023)

9-923-153-91

Sony Corporation
Personal A&V Products Company

97J0569-1
Printed in Japan

© 1997. 10

Published by Quality Engineering Dept.
(Shibaura)

WM-EX550/EX552

SONY

SERVICE MANUAL

AEP Model
E Model
WM-EX550/EX552
Tourist Model
WM-EX552

SUPPLEMENT-1

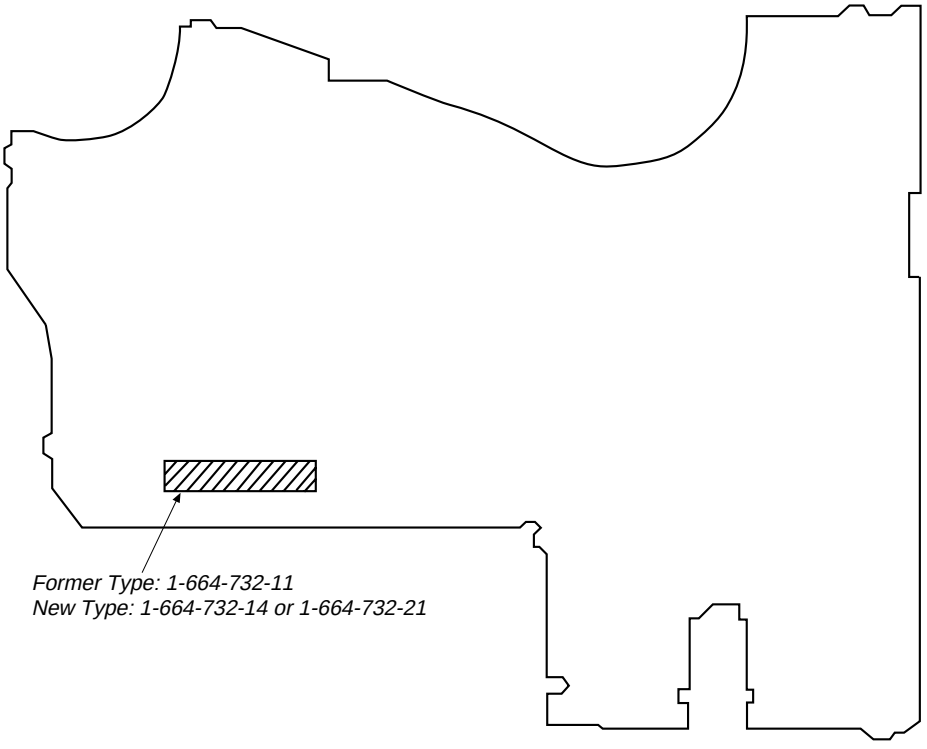
File this supplement with the service manual.

Subject: MAIN Board Modification

(ECN-WM700963)

- **New/Former Discrimination**

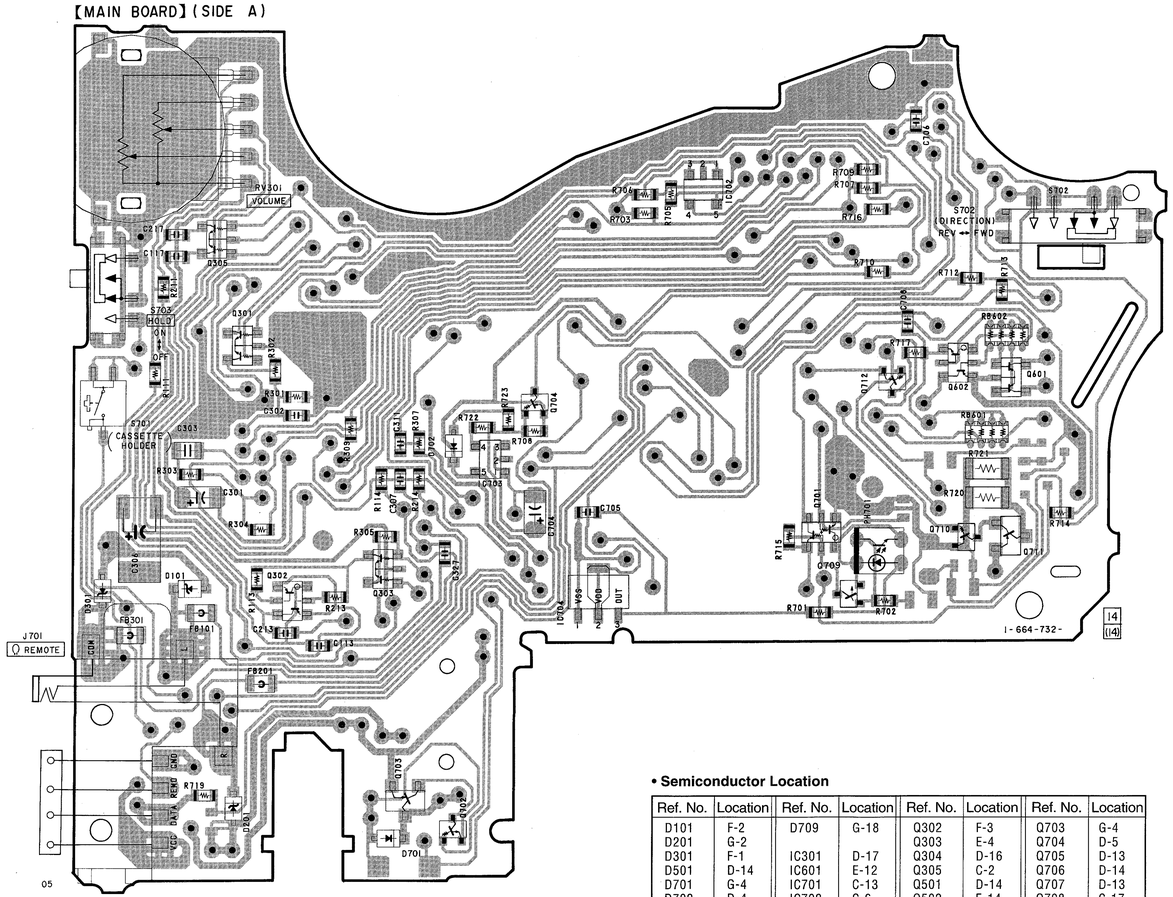
[MAIN BOARD] (SIDE B)



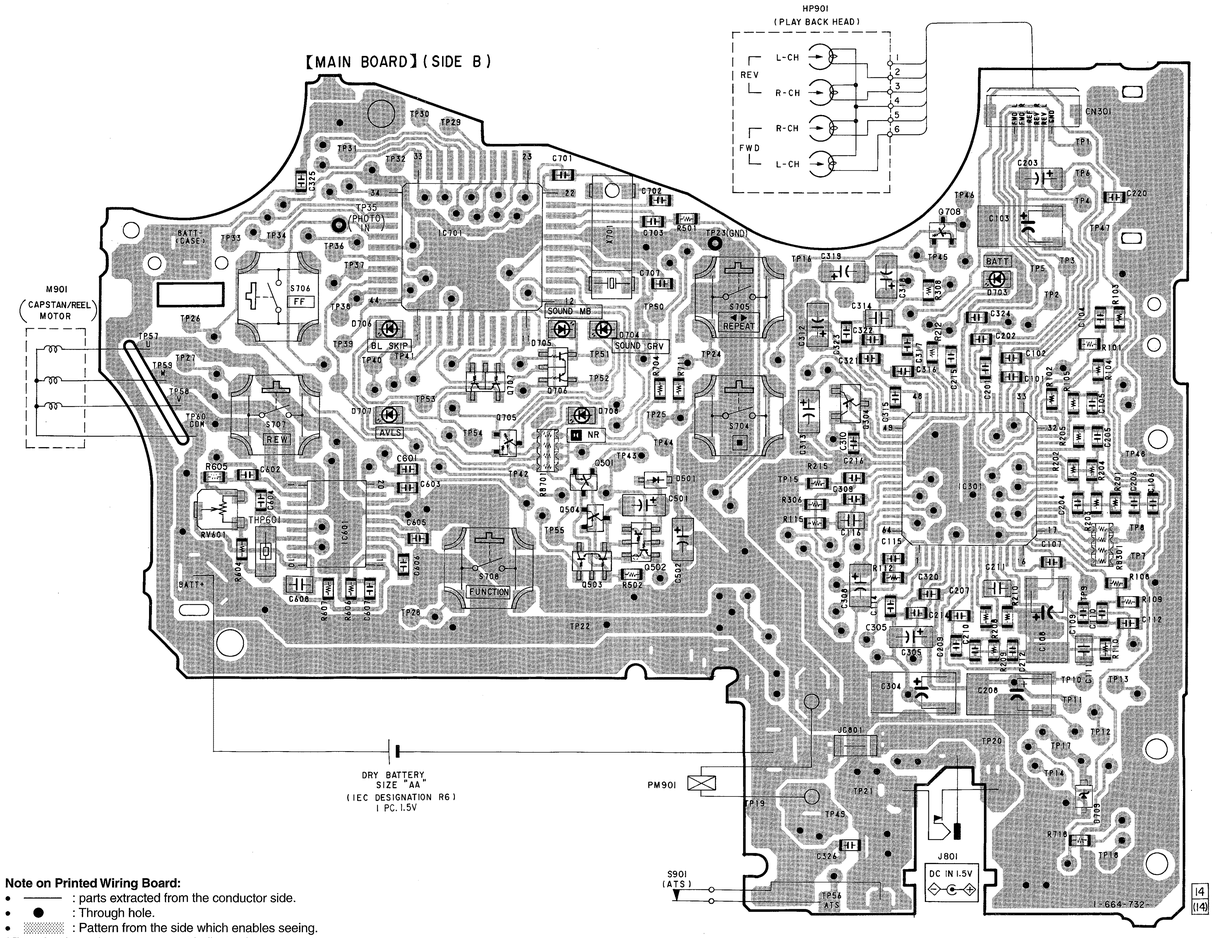
1. DIAGRAMS

1-1. PRINTED WIRING BOARD (SUFFIX-14)

【MAIN BOARD】(SIDE A)



【MAIN BOARD】(SIDE B)



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	F-2	D709	G-18	Q302	F-3	Q703	G-4
D201	G-2			Q303	E-4	Q704	D-5
D301	F-1	IC301	D-17	Q304	D-16	Q705	D-13
D501	D-14	IC601	E-12	Q305	C-2	Q706	D-14
D701	G-4	IC701	C-13	Q501	D-14	Q707	D-13
D702	D-4	IC702	C-6	Q502	E-14	Q708	C-17
D703	C-17	IC703	E-4	Q503	E-14	Q709	F-7
D704	C-14	IC704	F-5	Q504	E-14	Q710	E-8
D705	C-14			Q601	D-8	Q711	E-8
D706	C-12	PH701	E-7	Q602	D-8	Q712	D-7
D707	D-12			Q701	E-7		
D708	D-14	Q301	D-3	Q702	G-4		

Note on Printed Wiring Board:

- ——— : parts extracted from the conductor side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.

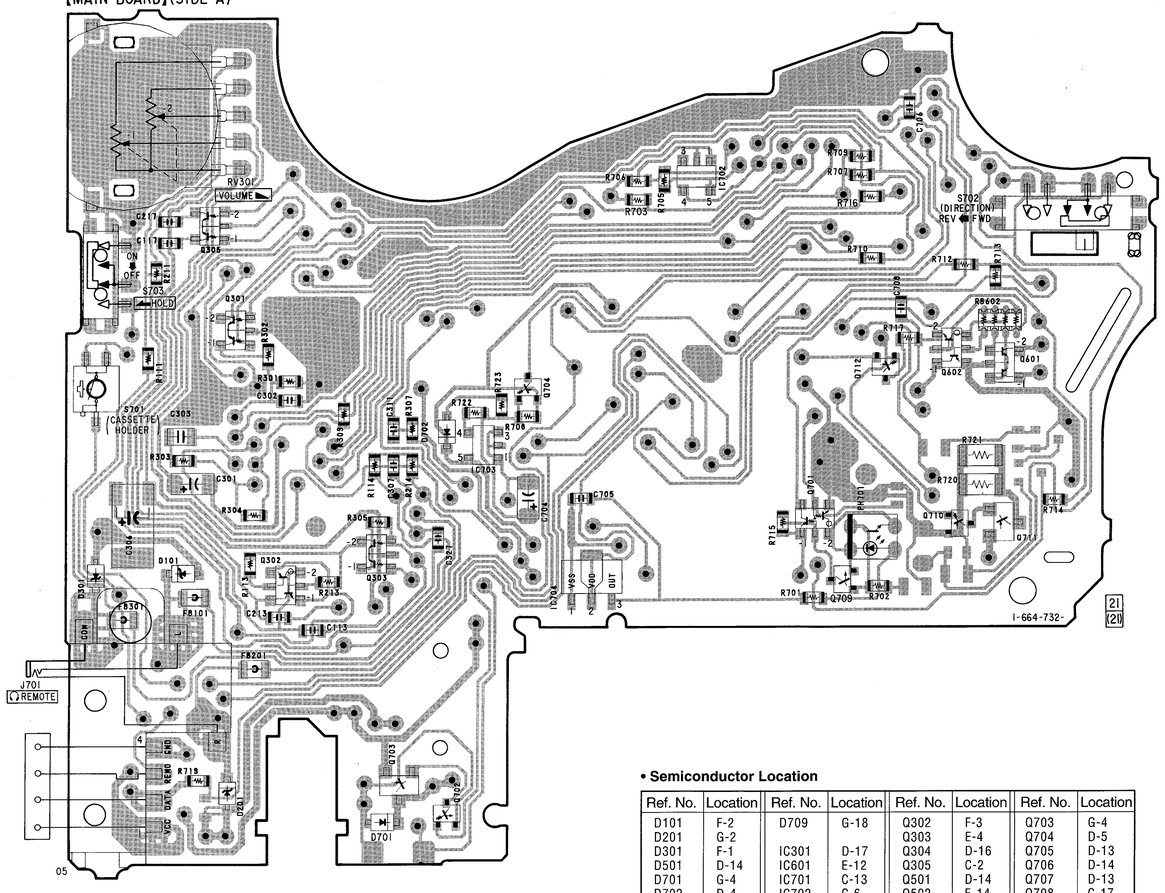
(The other layers' patterns are not indicated.)

Caution:

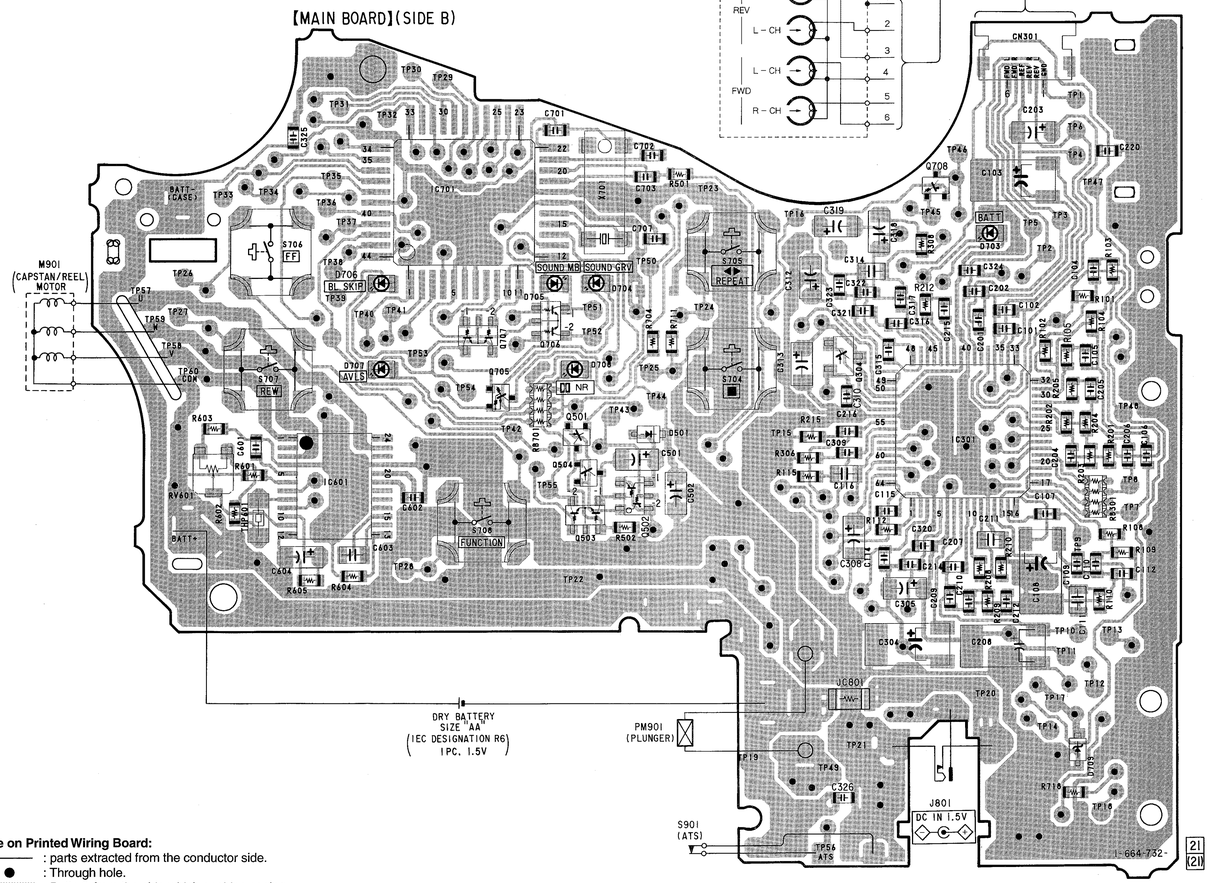
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

1-2. PRINTED WIRING BOARD (SUFFIX-21)

【MAIN BOARD】(SIDE A)



【MAIN BOARD】(SIDE B)



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	F-2	D709	G-18	Q302	F-3	Q703	G-4
D201	G-2			Q303	E-4	Q704	D-5
D301	F-1	IC301	D-17	Q304	D-16	Q705	D-13
D501	D-14	IC601	E-12	Q305	C-2	Q706	D-14
D701	G-4	IC701	C-13	Q501	D-14	Q707	D-13
D702	D-4	IC702	C-6	Q502	E-14	Q708	C-17
D703	C-17	IC703	E-4	Q503	E-14	Q709	F-7
D704	C-14	IC704	F-5	Q504	E-14	Q710	E-8
D705	C-14			Q601	D-8	Q711	E-8
D706	C-12	PH701	E-7	Q602	D-8	Q712	D-7
D707	D-12			Q701	E-7		
D708	D-14	Q301	D-2	Q702	G-4		

Note on Printed Wiring Board:

- ——— : parts extracted from the conductor side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:
Pattern face side: (Side B) Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A) Parts on the parts face side seen from the parts face are indicated.

【MAIN BOARD】

IC301
AUDIO MASTER AMP
IC301 TA2072AF

IC702
VOLTAGE DETECT
IC702 PST9010

IC704
REGULATOR
IC704 S-81215

IC701
SYSTEM CONTROLLER
IC701 MSM6576-8905-K

IC703
RESET SIGNAL GENERATOR

IC601
MOTOR DRIVER
IC601 LB1674V-TLM

IC601
MOTOR DRIVER
IC601 MM1279XVBE

Q501
POWER CONTROL SWITCH

Q502-1, 503-1, 504
DC/DC CONVERTER

Q502-2
DC/DC CONVERTER SWITCH

Q503-2
LED DRIVE

Q705-707
LED DRIVE

Q708
MUTE CONTROL SWITCH

Q302
LEVEL CONTROL

Q505
AVLS SWITCH

Q504
RIPPLE FILTER

Q501
MEGABASS/ GROOVE SWITCHING

Q704
RESET SWITCH

Q710, 711
BATT DETECT

Q702, 703
PLUNGER DRIVE

Q601, 602-1
MOTOR CONTROL SWITCH

Q602-2
MOTOR BRAKE SWITCH

Q712
LED DRIVE

Q501-1
BLANK SKIP AMS LEVEL CHANGE SWITCH

RV601
TAPE SPEED

RV601
TAPE SPEED

RV501
10K*10K
VOLUME

S701
(CASSETTE HOLDER)

S702
(DIRECTION)
FWD ⟷ REV

S703
HOLD
OFF
ON

S704
■

S705
◀▶
REPEAT

S706
FF

S707
REW

S708
FUNCTION

TP35 (STOP)
TP36 (PLAY)
TP37 (FF)
TP38 (REW)
TP39 (FUNCTION)
TP48 (HOLD)

HP901
(PLAYBACK)

CN501
2P

J701
REMOTE

M901
(CAPSTAN/REEL MOTOR)

JB01
DC IN 1.5V

ORY BATTERY
SIZE"AA"
(IEC DESIGNATION R6)
1PC.1.5V

TOTAL CURRENT
PLAY :40mA
FF/REW:47mA

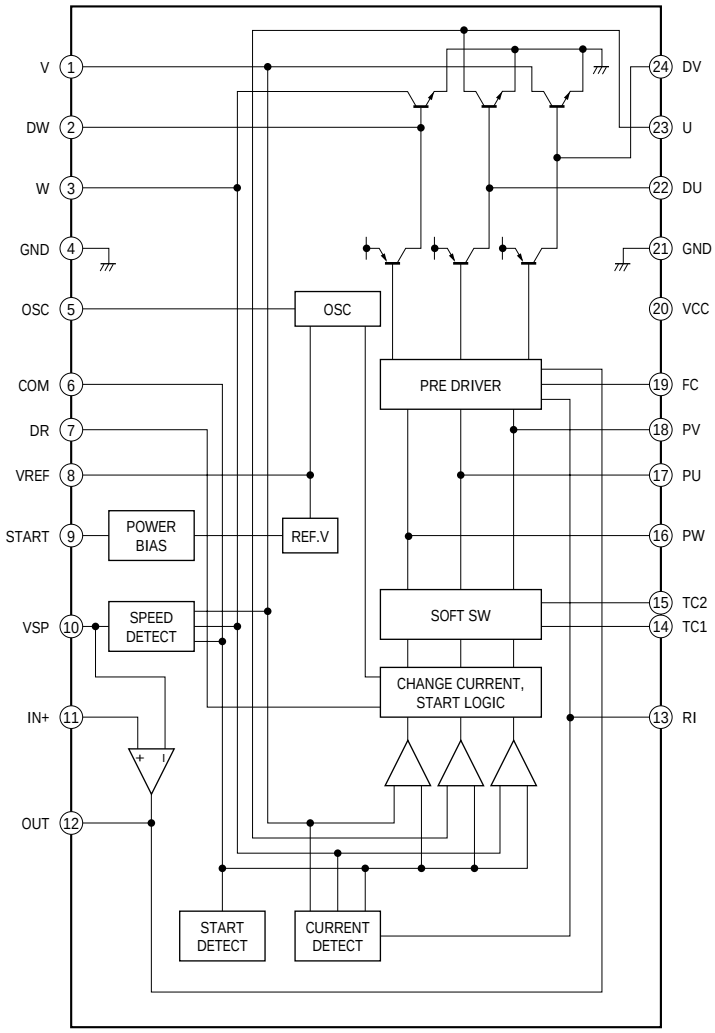
(SUFFIX-21)

(SUFFIX-14)

WM-EX550/EX552 (AEP, E, JE)

• **IC Block Diagram**

IC601 LB1674V-TLM (SUFFIX-21)



MAIN

2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-3061-413-A	MAIN BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-164-473-11	CERAMIC CHIP	820PF	10%	50V
C102	1-164-473-11	CERAMIC CHIP	820PF	10%	50V
C103	1-128-024-11	ELECT CHIP	4.7uF	20%	10V
C104	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C105	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C106	1-115-156-11	CERAMIC CHIP	1uF		10V
C107	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C108	1-128-014-11	ELECT CHIP	10uF	20%	4V
C109	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V
C110	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C111	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C112	1-115-156-11	CERAMIC CHIP	1uF		10V
C113	1-115-156-11	CERAMIC CHIP	1uF		10V
C114	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C115	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C116	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C117	1-115-156-11	CERAMIC CHIP	1uF		10V
C201	1-164-473-11	CERAMIC CHIP	820PF	10%	50V
C202	1-164-473-11	CERAMIC CHIP	820PF	10%	50V
C203	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C204	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C205	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C206	1-115-156-11	CERAMIC CHIP	1uF	10V	
C207	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C208	1-128-014-11	ELECT CHIP	10uF	20%	4V
C209	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V
C210	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C211	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C212	1-115-156-11	CERAMIC CHIP	1uF		10V
C213	1-115-156-11	CERAMIC CHIP	1uF		10V
C214	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C215	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C216	1-115-156-11	CERAMIC CHIP	1uF		10V
C217	1-115-156-11	CERAMIC CHIP	1uF		10V
C220	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C301	1-135-316-11	TANTALUM CHIP	22uF	20%	2.5V
C302	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C303	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C304	1-128-024-11	ELECT CHIP	4.7uF	20%	10V
C305	1-135-316-11	TANTALUM CHIP	22uF	20%	2.5V
C306	1-110-423-11	ELECT CHIP	2.2uF	20%	25V
C307	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C308	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C309	1-115-156-11	CERAMIC CHIP	1uF		10V
C310	1-115-156-11	CERAMIC CHIP	1uF		10V
C311	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C312	1-109-935-11	TANTALUM CHIP	4.7uF	20%	4V
C313	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C314	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C315	1-115-156-11	CERAMIC CHIP	1uF		10V
C316	1-115-156-11	CERAMIC CHIP	1uF		10V
C317	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C318	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C319	1-107-688-11	TANTALUM CHIP	1.5uF	20%	10V
C320	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C321	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C322	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C323	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C324	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C325	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C326	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C327	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C501	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C502	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C601	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V (SUFFIX-21)
C601	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (SUFFIX-14)
C602	1-113-619-11	CERAMIC CHIP	0.47uF		10V (SUFIFX-21)
C602	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (SUFFIX-14)
C603	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V (SUFFIX-21)
C603	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (SUFFIX-14)
C604	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (SUFFIX-14)

Ref. No.	Part No.	Description			Remark
C604	1-135-221-11	TANTALUM CHIP	3.3uF	20%	4V (SUFFIX-21)
C605	1-164-156-11	CERAMIC CHIP	0.1uF		25V (SUFFIX-14)
C606	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V (SUFFIX-14)
C607	1-107-826-11	CERAMIC CHIP	0.1uF	10%	10V (SUFFIX-14)
C608	1-109-982-11	CERAMIC CHIP	1uF	10%	10V (SUFFIX-14)
C701	1-115-156-11	CERAMIC CHIP	1uF		10V
C702	1-115-156-11	CERAMIC CHIP	1uF		10V
C703	1-115-156-11	CERAMIC CHIP	1uF		10V
C704	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C705	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C706	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C707	1-115-156-11	CERAMIC CHIP	1uF		10V
C708	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN301	1-766-336-21	CONNECTOR, FFC/FPC 6P			
		< DIODE >			
D101	8-719-423-35	DIODE MA8120-H			
D201	8-719-423-35	DIODE MA8120-H			
D301	8-719-423-35	DIODE MA8120-H			
D501	8-719-049-09	DIODE 1SS367-T3SONY			
D701	8-719-404-49	DIODE MA111			
D702	8-719-049-09	DIODE 1SS367-T3SONY			
D703	8-719-051-01	LED CL-170HR-CD-T (BATT)			
D704	8-719-051-01	LED CL-170HR-CD-T (SOUND GRV)			
D705	8-719-051-01	LED CL-170HR-CD-T (SOUND MB)			
D706	8-719-051-01	LED CL-170HR-CD-T (BL SKIP)			
D707	8-719-051-01	LED CL-170HR-CD-T (AVLS)			
D708	8-719-051-01	LED CL-170HR-CD-T (□□ NR)			
D709	8-719-423-35	DIODE MA8120-H			
		< FERRITE BEAD >			
FB101	1-414-235-11	INDUCTOR, FERRITE BEAD			
FB201	1-414-235-11	INDUCTOR, FERRITE BEAD			
FB301	1-414-235-11	INDUCTOR, FERRITE BEAD			
		< IC >			
IC301	8-759-359-76	IC TA2072AF			
IC601	8-759-275-47	IC LB1674V-TLM (SUFFIX-21)			
IC601	8-759-356-46	IC MM1279XVBE (SUFFIX-14)			
IC701	8-759-479-49	IC MSM6576-83GS-K			
IC702	8-759-280-85	IC PST9010NL			
IC703	8-759-430-08	IC PST9008NL			
IC704	8-759-469-63	IC S-81215SGUP-DQK-T1			
		< JACK >			
J701	1-778-930-21	JACK 7P (REMOTE)			
J801	1-779-080-11	JACK, DC (POLARITY UNIFIED TYPE)			(DC IN 1.5V)
		< CHIP CONDUCTOR >			
JC801	1-216-296-00	CONDUCTOR, CHIP (3216)			

Ref. No.	Part No.	Description			Remark
		< PHOTO INTERRUPTER >			
PH701	8-719-988-15	PHTO REFLECTOR PR-11-C			
		< TRANSISTOR >			
Q301	8-729-022-66	TRANSISTOR XN1210-TX			
Q302	8-729-422-39	TRANSISTOR XN4404			
Q303	8-729-403-17	TRANSISTOR XN1215			
Q304	8-729-230-72	TRANSISTOR 2SA1362YG			
Q305	8-729-421-23	TRANSISTOR XN1216			
Q501	8-729-420-24	TRANSISTOR 2SB1218A-QRS			
Q502	8-729-115-28	TRANSISTOR BN1L3Z-K			
Q503	8-729-403-17	TRANSISTOR XN1215			
Q504	8-729-420-24	TRANSISTOR 2SB1218A-QRS			
Q601	8-729-403-42	TRANSISTOR XN1401			
Q602	8-729-402-84	TRANSISTOR XN4601			
Q701	8-729-422-18	TRANSISTOR XN4315			
Q702	8-729-421-26	TRANSISTOR UN5216			
Q703	8-729-230-72	TRANSISTOR 2SA1362YG			
Q704	8-729-422-51	TRANSISTOR UN5110-QRS			
Q705	8-729-402-42	TRANSISTOR UN5213			
Q706	8-729-403-17	TRANSISTOR XN1215			
Q707	8-729-403-17	TRANSISTOR XN1215			
Q708	8-729-420-24	TRANSISTOR 2SB1218A-QRS			
Q709	8-729-030-53	TRANSISTOR MSD1819A-RT1			
Q710	8-729-421-26	TRANSISTOR UN5216			
Q711	8-729-230-72	TRANSISTOR 2SA1362YG			
Q712	8-729-422-51	TRANSISTOR UN5110-QRS			
		< RESISTOR >			
R101	1-216-812-11	METAL CHIP	180	5%	1/16W
R102	1-216-847-11	METAL CHIP	150K	5%	1/16W
R103	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R104	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R105	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R108	1-218-270-11	RES, CHIP	1.1K (1608)		
R109	1-216-834-11	METAL CHIP	12K	5%	1/16W
R110	1-216-852-11	METAL CHIP	390K	5%	1/16W
R111	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R112	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R113	1-216-809-11	METAL CHIP	100	5%	1/16W
R114	1-216-840-11	METAL CHIP	39K	5%	1/16W
R115	1-216-793-11	RES, CHIP	4.7 (1608)		
R201	1-216-812-11	METAL CHIP	180	5%	1/16W
R202	1-216-847-11	METAL CHIP	150K	5%	1/16W
R203	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R204	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R205	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R208	1-218-270-11	RES, CHIP	1.1K (1608)		
R209	1-216-834-11	METAL CHIP	12K	5%	1/16W
R210	1-216-852-11	METAL CHIP	390K	5%	1/16W
R211	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R212	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R213	1-216-809-11	METAL CHIP	100	5%	1/16W
R214	1-216-840-11	METAL CHIP	39K	5%	1/16W
R215	1-216-793-11	RES, CHIP	4.7 (1608)		
R301	1-218-891-11	RES, CHIP	68K (1608)		

MAIN

Ref. No.	Part No.	Description			Remark
R302	1-216-839-11	METAL CHIP	33K	5%	1/16W
R303	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R304	1-218-295-11	RES, CHIP	43K (1608)		
R305	1-216-821-11	METAL CHIP	1K	5%	1/16W
R306	1-216-793-11	RES, CHIP	4.7 (1608)		
R307	1-216-847-11	METAL CHIP	150K	5%	1/16W
R308	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R309	1-216-841-11	METAL CHIP	47K	5%	1/16W
R501	1-216-849-11	METAL CHIP	220K	5%	1/16W
R502	1-216-833-11	METAL CHIP	10K	5%	1/16W
R601	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (SUFFIX-21)
R602	1-216-831-11	METAL CHIP	6.8K	5%	1/16W (SUFFIX-21)
R603	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (SUFFIX-21)
R604	1-216-809-11	METAL CHIP	100	5%	1/16W (SUFFIX-21)
R604	1-216-817-11	METAL CHIP	470	5%	1/16W (SUFFIX-14)
R605	1-216-830-11	METAL CHIP	5.6K	5%	1/16W (SUFFIX-14)
R605	1-216-837-11	METAL CHIP	22K	5%	1/16W (SUFFIX-21)
R606	1-216-809-11	METAL CHIP	100	5%	1/16W (SUFFIX-14)
R607	1-216-837-11	METAL CHIP	22K	5%	1/16W (SUFFIX-14)
R701	1-216-817-11	METAL CHIP	470	5%	1/16W
R702	1-216-851-11	METAL CHIP	330K	5%	1/16W
R703	1-216-849-11	METAL CHIP	220K	5%	1/16W
R704	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R705	1-216-849-11	METAL CHIP	220K	5%	1/16W
R706	1-216-849-11	METAL CHIP	220K	5%	1/16W
R707	1-218-870-11	RES, CHIP	9.1K (1608)		
R708	1-216-851-11	METAL CHIP	330K	5%	1/16W
R709	1-216-845-11	METAL CHIP	100K	5%	1/16W
R710	1-218-836-11	RES, CHIP	360 (1608)		
R711	1-218-845-11	RES, CHIP	820 (1608)		
R712	1-218-847-11	RES, CHIP	1.0K (1608)		
R713	1-218-849-11	RES, CHIP	1.2K (1608)		
R714	1-218-866-11	RES, CHIP	6.2K (1608)		
R715	1-216-849-11	METAL CHIP	220K	5%	1/16W
R716	1-216-849-11	METAL CHIP	220K	5%	1/16W
R717	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R718	1-216-821-11	METAL CHIP	1K	5%	1/16W
R719	1-216-821-11	METAL CHIP	1K	5%	1/16W
R720	1-216-162-00	RES, CHIP	33 (3216)		
R721	1-216-162-00	RES, CHIP	33 (3216)		
R722	1-216-817-11	METAL CHIP	470	5%	1/16W
R723	1-216-817-11	METAL CHIP	470	5%	1/16W
		< COMPOSITION CIRCUIT BLOCK >			
RB301	1-233-872-21	RES, NETWORK (CHIP TYPE) (3216)			
RB601	1-233-873-21	RES, NETWORK (CHIP TYPE) (3216)			(SUFFIX-14)
RB602	1-233-576-11	RES, CHIP NETWORK 100			
RB701	1-233-418-11	RES, CHIP NETWORK 3.3K (3216)			

Ref. No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV301	1-225-342-11	RES, VAR, CARBON 10K/10K (VOLUME ◣)	
RV601	1-223-576-11	RES, ADJ, METAL GLAZE 2.2K (SUFFIX-14)	
RV601	1-223-921-11	RES, ADJ, METAL GLAZE 4.7K (SUFFIX-21)	
		< SWITCH >	
S701	1-762-970-21	SWITCH, PUSH (1 KEY)(CASSETTE HOLDER)	
S702	1-572-581-11	SWITCH, SLIDE (DIRECTION)	
S703	1-572-922-11	SWITCH, SLIDE (◢HOLD)	
S704	1-692-453-11	SWITCH, KEY BOARD (■)	
S705	1-692-453-11	SWITCH, KEY BOARD (◀▶ REPEAT)	
S706	1-692-453-11	SWITCH, KEY BOARD (FF)	
S707	1-692-453-11	SWITCH, KEY BOARD (REW)	
S708	1-692-453-11	SWITCH, KEY BOARD (FUNCTION)	
		< THERMISTOR (POSITIVE) >	
THP601	1-810-794-11	THERMISTOR, POSITIVE	
		< VIBRATOR >	
X701	1-760-872-11	VIBRATOR, CRYSTAL (32.768kHz)	

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97K0568-1
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Published by Quality Engineering Dept.
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